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ESTYDILTGSYHDYGLDV (SEQ ID NO. 2822) DRILTGYDILTGHCTDADFDI (SEQ ID NO. 2885) VLITNYDILTGYTREDAFDI (SEQ ID NO. 2939) GMGDHYGMDV (SEQ ID NO. 2161) DRGASYDILTGYTAPAQGVAFDI GRGGDINO: 29697	ETRICATION CROUN DIVO 2747) ETRICATION CROUN DIVO 2747) DEBINITATION CROUN DIVO 2749 CROUN CROUN CROUN DIVO 2749 CROUN CROUN CROUN DIVO 2749 ARRACALL CARRAMET (SEQ ID NO 2249) GROCHING TO SERVE (SEQ ID NO 2249) GROCHING TO SERVE (SEQ ID NO 2249) GROCHING TO SERVE (SEQ ID NO 2249) DEPUNDATORY CROUN CROUN CROUN DIVO 2349) GROUN LICONY CROUN CROUN CROUN DIVO 2349) DEPUNDATORY CROUN CROUN CROUN DIVO 2349) DEPUNDATORY CROUN CROUN CROUN DIVO 2349) DEPUNDATORY CROUN CROUN DIVO 2349) DEPUNDATORY CROUN DIVO 2349) DEPUNDATORY CROUN DIVO 2349) ARY DELL' CORPORATORY (SEQ ID NO 2249) DEPUNDATORY CROUN CROUN DIVO 2349) GROUN LICONY CROUN CROUN DIVO 2349) ARY DELL' CROUN CROUN DIVO 2349 ARY DELL' CROUN CROUN DIVO 2357) ARY DELL' CROUN CROUN DIVO 2359) ARY DELL' CROUN CROUN DIVO 2359) ARY DELL' CROUN CROUN DIVO 2359) ARY DELL' CROUN CROUN CROUN 2359) ARY DELL' CROUN CROUN 2359) ARY DELL' CROUN CROUN 2359) ARY DELL' CROUN CROUN CROUN 2359) ARY DELL' CROUN
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	99-110 SERVENALPE (SEQ ID NO. 2979) 99-111 TDRECARDYTARWGMDY (SEQ ID NO. 2979) 99-111 TDRECARDYTARWGMDY (SEQ ID NO. 2874) 99-111 GROYYDETTYPE (SEQ ID NO. 2779) 99-111 GROYYDETTYPEN (SEQ ID NO. 2779) 99-110 ARWYDETTYPEN (SEQ ID NO. 2779) 99-110 DORKAGDI (SEQ ID NO. 2779) 99-110 DORKAGDI (SEQ ID NO. 2779) 99-110 DOGRYLID (SEQ ID NO. 2179) 99-110 DOGRYLID (SEQ ID NO. 2175)
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	223 - 233 233 - 243 233 - 242 231 - 240 233 - 243 230 - 240 223 - 233 236 - 246 222 - 233
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1074D10 1074B01 1074B02 1074B08 1074B106 1074H06 1075B04 1075B04 1075B04 1075B09 1075B09 1075B09 1075B12 1075B	1075E11 1075E12 1075F02 1075F04 1075F06 1075F09 1075F10 1075F10

GRYDMALTROGYEDY (SEQ D NO. 2384) GRYDMALTROGYEDY (SEQ D NO. 2385) THYDDALTGYPKGYEDY (SEQ D NO. 2385) THYDDALTGYPKGYEDY (SEQ D NO. 2385) GRYDMALTGYPKGYEDY (SEQ D NO. 2376) GRYDMALTGYPKGYED NO. 2175) GRYDMALTGYPKGYEDY (SEQ D NO. 2176) DOGRAYDLI GYRY (SEQ D NO. 2176) GROYDLITGYPT (SEQ D NO. 2376) DOGRAYDLI GYRY (SEQ D NO. 2376) DOGRAYDLI GYRY (SEQ D NO. 2376) BRODILTGYN (SEQ D NO. 2376) DOGRAYDLI GYRY (SEQ D NO. 2376) DOGRAYDLI GYRY (SEQ D NO. 2376) DOGRAYDLI GYRY (SEQ D NO. 2376) GRAYDLI GYRY (SEQ D NO. 2376) DOGRAYDLI GYRY (SEQ D NO. 2376) ELLA GYRY (SEQ D NO. 2376) DOGRAYDLI GYRY (SEQ D NO. 2376) GRYYDMILTGYYMG (SEQ D NO. 2376) HANDLIGY (MAG D NO. 2376)
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	, ,	ELGLSIVGALTGALDM (SEQ ID NO: 21/4) VPYDILTGYWGAFDV (SEQ ID NO: 2827)	GSGYDLLTGYFTGSPLDY (SEQ ID NO: 2766)	GSGYDLLTGYFTGSPLDY (SEQ ID NO: 2766)	VYYDILTGYNLFFDY (SEQ ID NO: 2177)	VYYDILTGYNLFFDY (SEQ ID NO: 2177)	MEYDILTGYYGGYFDY (SEQ ID NO: 21/9)	ELGLSIVGATTGALDM (SEQ ID NO: 21/4)	ELGLSIVGATTGALDM (SEQ ID NO: 21/4)	ELGLSIVGATTGALDM (SEQ ID NO: 2174)	ELGLSIVGATTGALDM (SEQ ID NO: 21/4)	DRGAPNYDILTGYYAPAQGVAFDI	(SEQ ID NO: 2176)				,						SEGIIFGVD (SEQ ID INO: 21/8)							EGMINDFINSHHY YTMIDA (SEQ ID NO: 2182)		
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I076G12	1076H02 1076H04	I076H05	1076H06 T076H00	1076H10	1077D06	T078B04	T078E10	T002A01-K	T002A01-R	1026C04-K	T026C04-R	1067810	TOOT	TOKRODE	-	502501	T025B06	T025B09	I026C04	I027B12	I030A10	I064C04	I064C07	I065D04	I065D08	I065F08	1067F05	I068B04	1068B08	I068C08	I068F03	I069B07

99 - 114 AYYDPITGYSTROHOI (SEQ DD NO 2153) 99 - 116 AYYDPITGYSTROHOI (SEQ DD NO 2153) 99 - 116 AYYDPITGYSTROHOI (SEQ DD NO 2154) 99 - 116 AYYDPITGYSTROHOI (SEQ DD NO 2174) 90 - 115 DETAIL (SEQ DD NO 2174) 90 - 115 DETAILTOFREED (SEQ DD NO 2174) 90 - 117 AYYDLTGYTRYTROHOI (SEQ DD NO 2178) 90 - 117 AYYDLTGYTRYTRYTROHOI (SEQ DD NO 2187) 90 - 118 AYYDLTGYTRYTRYTROHOI (SEQ DD NO 2187) 90 - 118 AYYDLTGYTRAHOY (SEQ DD NO 2187) 90 - 119 AYYDLTGYTRAHOY (SEQ DD NO 2187) 90 - 110 AYYDLTGYTRAHOY (SEQ DD NO 2987) 90 - 110 AYYDLTGYTRAHOY (SEQ DD NO 2987) 90 - 110 AYYDLTGYTRAHOY (SEQ DD NO 2987) 90 - 110 AYYDLTGYTRYTRYGADY (SEQ DD NO 2987) 90 - 110 AYYDLTGYTTTYGYAHAND (SEQ DD NO 2987) 90 - 110 AYYDLTGYTTYTYGYAHAND (SEQ DD NO 2987) 90 - 110 AYYDLTGYTTYGYGAD (SEQ DD NO 2987) 90 - 110 AYYDLTGYTTYGYGAD (SEQ DD NO 2987) 90 - 110 AYYDLTGYTYGYGAD (SEQ DD NO 2987) 90 - 110 AYYDLTGYGYTYGY (SEQ DD NO 2987) 90 - 111 AYYDLTGYGYTYGY (SEQ DD NO 2989) 90 - 111 AYYDLTGYGYTYGY (SEQ DN NO 2989) 90 - 111 AYYDLTGYGYTYGY (SEQ DN NO 2989) 90 - 111 AYYDLTGYGYTYGY (SEQ DN NO 2989)
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DRGASNYDL.TGYYAPAQGVAFDI (SEQ DD NO: 2969) ATYDPLTGYSFDGFDI (SEQ ID NO: 2153) ATYDPLTGYSFDGFDI (SEQ ID NO: 2153) ATYDPLTGYSFDGFDI (SEQ ID NO: 2153)		OVOBLALMY, TY RIDA CALL D. NO. 2947) ATYDPLTOYSDOED (1800 D. NO. 2947) ATYDPLTOYSTORD (1800 D. NO. 2020) REYDLLTOYYTAMDY (1800 D. NO. 2984) TRAMDYLTRYSDE (1800 D. NO. 2984) TRAMDYLTRYSTOR (1800 D. NO. 2984) AGSSLATYOTD (1800 D. NO. 2753)
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EGAADTIJNGQYFQH (SEQ ID NO: 2815) PITYGQQI, WHRAGAFAN (SEQ ID NO: 3080) ATYDPILTOYSEDGED (SEQ ID NO: 2023) PI GITAVRGAKTDAYGI (SEQ ID NO: 2229) RESYYDLITOYSEDGEMON (SEQ ID NO: 2229) ATYDPILTOYSEDGEMON (SEQ ID NO: 2029) ATYDPILTOYSEDGEMON (SEQ ID NO: 2039)		-	_	GEKAKI I DILI GI I SAWGGI IMDV (SEO ID NO: 3045)		-		•		•	-		-		-			_			•			-					AGSSLMTYGTDV (SEQ ID NO: 2773)
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	ALTOPACT USE ADDRESS TO SEED IN OUR 2133) ACTESTANTYCHOUR OF REQ IN OUR 2153) ACTESTANTYCHOUR OF REQ IN OUR 2099) THYDLICGYTROAFDI (SEQ IN OUR 2099) THYDLICGYTROAFDI (SEQ IN OUR 2099) VQMDSESTYDLICGHOUR PYTROY (SED IN OUR 2132)	ATYDPLTGYSFDGFD (SEQ ID NO; 2153) ATYDPLTGYSFDGFD (SEQ ID NO; 2153) ATYDPLTGYSFDGFD (SEQ ID NO; 2153) GDFGDYDLTGYYPYYGAIDY (SEQ ID NO; 3062) SYYDLTGYYPROWN (SEQ ID NO; 3004) DLWYYDLTGYYPROWN (SEQ ID NO; 3004) DLWYYDLTGYYRD	DLWYZDLICYYZDDAPI (S26) DNO: 2999) SRDLLLPPHYGMDV (SEQ DNO: 2133) ATYDPLTAYSEPGERQ DNO: 2730) ATYDPLTAYSEPGERQ (SEQ DNO: 2153) GYHDTLTSYNYNWFDP (SEQ DNO: 3006) AQMOSEYZDLLTGRRVGPYZFDY AGRESYZDLLTGRRVGPYZFDY	ATYDPLTCYSEDGED) (SRQ DI NO: 153) GMGDHYMDV (SRQ DI NO: 3008) GMGDHYMDV (SRQ DI NO: 2862) GHYDLICTYSQEPHO (SRQ DI NO: 2862) ATYDPLICTYSQEPHO (SRQ DI NO: 2155) ATYDPLICTYSTOPHO (SRQ DI NO: 2155) GMGDHYGYSTOPHO (SRQ DI NO: 2155) GMGDHYGYSTOPHO (SRQ DI NO: 2155) GMGDHYGYSTOPHO (SRQ DI NO: 2155)
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1866	1867	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901
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	35 50 - 66 35 50 - 66
	118 26-35 120 26-35 121 26-35 120 26-35 127 26-35 117 26-35
28	222 - 230 1 223 - 233 1 226 - 236 1 224 - 232 1 232 - 242 1 219 - 230 1
	183 - 189 184 - 190 187 - 193 185 - 191 193 - 199 180 - 186
161 161 161 162 163 164 165 165 165 165 165 165 165 165 165 165	157 - 167 158 - 168 159 - 171 159 - 169 165 - 177 154 - 164
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1902 1903 1904 1906 1907 1910 1911 1911 1912 1918 1918 1922 1923 1923 1923 1924 1927 1927 1927 1927 1928 1930 1930	1932 1933 1934 1935 1936
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I079F02 I079F03	1938	148 - 253 140 - 247	169 - 179 161 - 171	195		234 - 242	2 1-132 6 1-124	26 - 35		50 - 68	101 - 121	LPPDLRYCDGGMCSGFDWLGP (SEQ ID NO: 3219) ESLLTEEYCGSDCYS (SEQ ID NO: 3115)
1079G06	1946	135 - 245	157 - 170		62	225 - 234	_	- 92		20 - 66	99 - 108	GNSFGRTLDY (SEQ ID NO: 3158)
1079G06	1946	135 - 245	157 - 170		23	225 - 23	_	- 92	.,	99-	99 - 108	GNSFGRTLDY (SEQ ID NO: 3158)
I079H05	1947	136 - 243	157 - 167	7 183 - 1	88	222 - 232	2 1-120	0 26 - 35		99-09	99 - 109	DVPPPDGYLEV (SEO ID NO: 3192)
90H6Z0I	1948	134 - 241	157 - 167		68	222 - 230	-	26-		20 - 66	99 - 107	ASYPVPHDY (SEO ID NO: 3171)
I080A01	1949	131 - 242	154 - 166		8	221 - 231	-	26-		20-00	99 - 104	GGWLDD (SEO ID NO: 3210)
I080A02	1950	133 - 245	156 - 169		16	224 - 234				99-09	99 - 106	EHSSSFDY (SEO ID NO: 3111)
I080A05	1951	141 - 253	164 - 177			232 - 242	_			20-66	99 - 114	EGEGDGYNVAPYYFDY (SEO ID NO: 3160)
1080A06	1952	141 - 250	166 - 176		861	231 - 239	_				99 - 114	EAGGSGSYHFSFPFDY (SEO ID NO: 3188)
I080A07	1953	135 - 247	158 - 171	187 -	661	226 - 236	6 1-119				99 - 108	TGIWGYYFDY (SEQ ID NO: 3175)
I080A10	1954	141 - 252	164 - 176	192	861	231 - 241	1 1-125				99 - 114	DGNLNYDGSTDYGMDV (SEQ ID NO: 3140)
I080B02	1955	138 - 248	162 - 172			227 - 237	_			99-09	99-111	LGRNYTSSWSLDY (SEQ ID NO: 3181)
I080B03	1956	138 - 249	161 - 173	3 189 - 195		228 - 238	8 1-122	- 92	35	99-09	99-111	VVGGYSSTLGTDV (SEQ ID NO: 3096)
I080B05	1957	137 - 249	161 - 173	189	65	228 - 238	8 1-121	1 26 - 35		99-09	99-110	LGVARGREAFDL (SEQ ID NO: 3206)
1080B06	1958	142 - 254	165 - 177	7 193 - 199	٠.	232 - 243	3 1-126	- 92	37	52 - 69]	02 - 115	- 1
I080B07	1959	133 - 243	157 - 167			222 - 232	_	- 92	35	99-09	90 - 106	_
I080B08	1960	136 - 248	159 - 172	2 188 - 194		227 - 237	-	26 -	37 52	52 - 67	00 - 109	KORREKYFDY (SEQ ID NO: 3100)
I080B09	1961	142 - 254	165 - 178	194-	8	33 - 243	_	- 92	35	99-09	99 - 115	EKAIIETTSGEADPFDI (SEQ ID NO: 3151)
I080B10	1962	138 - 249	161 - 173	189	56	228 - 238	-	- 56	37	52 - 67]	.00-111	_
I080B11	1963	137 - 248	160 - 172		•	227 - 237	-	- 56	25	50 - 68	011 - 10	н
I080B12	1964	139 - 253	164 - 179		102	34 - 242	_	-92	35	99-09	99 - 112	NPYYYDSSEGFFDY (SEQ ID NO: 3109)
I080C03	1965	138 - 248	162 - 172		54	27 - 237	-		35		99 - 111	SGRQAYYYYGMDV (SEQ ID NO: 3091)
1080C06	1966	144 - 254	168 - 178		000	233 - 243	3 1-128	8 26-36		21 - 66	99-117	DYYDGSSYSSGDYYYYMDV (SEQ ID NO: 3227)
I080C07	1967	144 - 256	167 - 180	196-	502	235 - 245	5 1-128	- 92	35 50	99-09	99 - 117	DSDLVVIPTAIQGRYYFDN (SEQ ID NO: 3113)
I080C08	1968	137 - 249	160 - 173	189-1	55	228 - 238	8 1-121	1 26-35		99-09	99 - 110	GKRYSYGWYFDI (SEQ ID NO: 3130)
I080C10	1969	131 - 243	154 - 167			222 - 232	-	56-			99 - 104	DTPLDP (SEQ ID NO: 3094)
I080C11	1970	137 - 249	160 - 173			228 - 238	_	76-	22	99-09	99-110	EGDPTDNDAFDV (SEQ ID NO: 3155)
I080C12	1971	138 - 249	161 - 173	_		228 - 238	_			99-09	99 - 111	DGPTYARPYYLDH (SEQ ID NO: 3153)
I080D01	1972	136 - 245	161 - 171			226 - 234	_			99-09	99 - 109	DGTKYDWGFDY (SEQ ID NO: 3220)
I080D02	1973	141 - 254	164 - 177	193 - 199		232 - 243	3 1-125	5 26-35		99 - 09	99 - 114	ETFSHCSGGSCYPFDY (SEO ID NO: 3212)

												_					3136)																	
SGRQAYYYYGMDV (SEQ ID NO: 3091) EFFGYVYLTDY (SEQ ID NO: 3165)	LHCTGGSCGF (SEQ ID NO: 3186)	VDYTDYEMGAFEI (SEQ ID NO: 3187)	VGNFGYYFEY (SEQ ID NO: 3196)	SSRNGGDY (SEQ ID NO: 3214)	DLSRVAGREDY (SEQ ID NO: 3164)	HDVYGDLFDY (SEQ ID NO: 3211)		EGSIVGATLTINDAFDI (SEQ ID NO: 3150)	GKRYSYGWYFDI (SEQ ID NO: 3130)	DPFDY (SEQ ID NO: 3134)	DGPTYARPYYLDH (SEQ ID NO: 3153)	ESSGTLGEFSLELPFDY (SEQ ID NO: 3203)	LGRNYTSSWSLDY (SEQ ID NO: 3181)	NAFDY (SEQ ID NO: 3121)	GRGYSSSSSVYGMDI (SEQ ID NO: 3095)	VHSSGS (SEQ ID NO: 3216)	KRGDFGVIRLHHYYGMDV (SEQ ID NO: 3136)	HDVYGDLFDS (SEQ ID NO: 3205)	LRPDADYGDYGFDY (SEQ ID NO: 3218)	TSERGTYRQWDFDN (SEQ ID NO: 3204)	EAGEVAAIDY (SEQ ID NO: 3180)	GKRYSYGWYFDI (SEQ ID NO: 3130)	HDVYGDLFDS (SEQ ID NO: 3205)	GKRYSYGWYFDV (SEQ ID NO: 3217)	LHCTGGSCGF (SEQ ID NO: 3186)	ERGGRDGDYALDF (SEQ ID NO: 3148)	RTPDHNGDSGPPDY (SEQ ID NO: 3215)	DTTDY (SEQ ID NO: 2203)	ESLTGGAFDI (SEQ ID NO: 3117)	DITIDY (SEQ ID NO: 2203)	DTTDY (SEQ ID NO: 2203)	DTTDY (SEQ ID NO: 2203)	GAGSRYFDL (SEQ ID NO: 3118)	GGDRAFDI (SEQ ID NO: 3119)
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1974	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1080D04 1080D05	I080D08	I080D09	I080D11	I080D12	I080E01	T080E04	1080E06	I080E07	I080E08	I080E12	1080F04	I080F05	1080F06	1080F08	I080G03	1080G04	1080G10	1080G11	I080H01	I080H02	I080H03	1080H04	I080H05	1080H06	1080H07	1080H08	1080H09	I081A01	I081A03	I081A04	I081A06	I081A08	I081A09	I081A10

DTTDY (SEQ ID NO: 2203) GNAWGAFDI (SEQ ID NO: 2211)	GGDRAFDI (SEQ ID NO: 3119)	VKRYYFDY (SEQ ID NO: 3179)	ELTGANDAFDI (SEQ ID NO: 3104)	RRYALDY (SEQ ID NO: 2920)	DITIDY (SEQ ID NO: 2203)	DTTDY (SEQ ID NO: 2203)	GFALYKD (SEQ ID NO: 3169)	DTTDY (SEQ ID NO: 2203)	DTTDY (SEQ ID NO: 2203)	EDLTGDAFDI (SEQ ID NO: 3103)	GDAYFDY (SEQ ID NO: 3147)	GDAYFDY (SEQ ID NO: 3147)	DITIDY (SEQ ID NO: 2203)	DTTDY (SEQ ID NO: 2203)	EGLLDAFDI (SEQ ID NO: 3200)	DTTDY (SEQ ID NO: 2203)	VGYGGKGDY (SEQ ID NO: 3137)	GAGSRYFDL (SEQ ID NO: 3118)	GLAPIVDGGMTNDAFDI (SEQ ID NO: 3184)	DTTDY (SEQ ID NO: 2203)	RLIRKAR (SEQ ID NO: 3170)	DTTDY (SEQ ID NO: 2203)	ERGNQAFDI (SEQ ID NO: 3156)	RRYALDY (SEQ ID NO: 2920)	DTTDY (SEQ ID NO: 2203)	DTTDY (SEQ ID NO: 2203)	DITIDY (SEQ ID NO: 2203)	SRSPYDAFDI (SEQ ID NO: 3097)	DTIDY (SEQ ID NO: 2203)	DITIDY (SEQ ID NO: 2203)	DITDY (SEQ ID NO: 2203)			
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130	133-	133 - 3	136-2	132	130	130	132	130-	130-3	135-	132	132-3	130	130	134	130 - 3	130-	130-	130-	134-	134-	142 - 2	130-	132 - 3	130-	134	132 -:	130-	130-	130-	135-	130-	130-	130
2010	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
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/	LAFDI (SEQ ID NO: 31/4) DITIDY (SEO ID NO: 2203)	PAASSRGPKDAFDI (SEQ ID NO: 3129)	_		_	_	_	-	-	_	_	_		hand	-	_	-	_	_			_	Н	-	-		DRIAAAGGDAFDI (SEQ ID NO: 3194)	Н	_	щ	_		3 DILPDYDFWNPNEDASSLDT (SEQ ID NO: 3133)
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>	O NO: 3126) ID NO: 2748)		2197)		O NO: 3101)	3209)		SEQ ID NO: 3131)	(66		3148)	1)	3172)		3148)	NO: 2204)		D: 3159)	NO: 3160)		162)											
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Applicant's File		International Ap	plication
	DEFACE		Unassigned
Reference Number:	PF523PCT2	Number:	Onassigneu

INDICATIONS RELATING TO DEPOSITED BIOLOGICAL MATERIAL

		(PCT Rule 13bis)							
A.	The indications made below relate to the deposited biological material referred to on page 155 in Tabl 2, on page 24, paragraph 63, and on page 24, paragraph 64 of the description.								
В.	IDENTIFICATION OF DEPOSIT:		Further deposits are identified on an additional sheet:						
Name of Depository: Address of Depository:		American Type Culture Collection 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America							

	Accession Number	Date of Deposit		Accession Number	Date of Deposit
1	PTA-3238	27-Mar-2001	2	PTA-3239	27-Mar-2001
3	PTA-3240	27-Mar-2001	4	PTA-3241	27-Mar-2001
5	PTA-3242	27-Mar-2001	6	PTA-3243	27-Mar-2001
7	97768	22-Oct-1996	8	203518	10-Dec-1998

CANADA

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the firmishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual ease.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

DENMARK

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later that at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

WHAT IS CLAIMED IS:

 An antibody that immunospecifically binds to a protein consisting of amino acid residues 134-285 of SEQ ID NO:3228 and a protein consiting of amino acid residues 105-250 of SEQ ID NO:3239 comprising a first amino acid sequence at least 95% identical to a second amino acid sequence selected from the group consisting of:

- (a) an amino acid sequence comprising the amino acid sequence of a VHCDR of any one of the scFvs of SEQ ID NOS:3240 through 3247; and
- (b) an amino acid sequence comprising the amino acid sequence of a VLCDR of any one of the scFvs of SEQ ID NOS: 3240 through 3247.
- The antibody of claim 1, wherein the second amino acid sequence consists
 of the amino acid sequence of a VH domain of any one of the scFvs of SEQ ID NOS:
 3240 through 3247.
- The antibody of claim 1, wherein the second amino acid sequence consists
 of the amino acid sequence of a VL domain of any one of the scFvs of SEQ ID NOS: 3240
 through 3247.
- The antibody of claim 2, which also comprises an amino acid sequence at least 95% identical to the amino acid sequence of a VL domain of any one of the scFvs of SEO ID NOS:3240 through 3247.
- The antibody of claim 4, wherein the VH and VL domains are from the same scFv.
- The antibody of claim 1 wherein the first amino acid sequence is identical to the second amino acid sequence.
- The antibody of claim 6 wherein the second amino acid sequence consists
 of the amino acid sequence of a VH domain of any one of the scFvs of SEQ ID NOS:3240
 through 3247.

The antibody of claim 6 wherein the second amino acid sequence consists
of the amino acid sequence of a VL domain of any one of the scFvs of SEQ ID NOS:3240
through 3247.

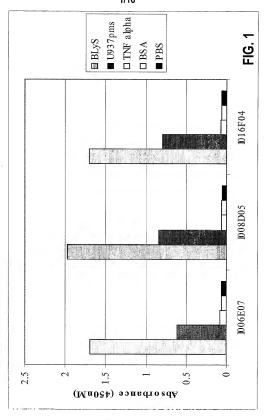
- The antibody of claim 8 which also comprises an amino acid sequence 100% identical to the amino acid sequence of a VL domain of any one of the scFvs of SEQ ID NOS:3240 through 3247.
- 10. The antibody of claim 1, wherein the antibody is selected from the group consisting of:
 - (a) a whole immunoglobulin molecule;
 - (b) an scFv;
 - (c) a monoclonal antibody;
 - (d) a human antibody;
 - (e) a chimerie antibody;
 - (f) a humanized antibody;
 - (g) a Fab fragment;
 - (h) an Fab' fragment;
 - (i) an F(ab')2;
 - (j) an Fv; and
 - (k) a disulfide linked Fv.
- The antibody of claim 1, wherein the antibody has a dissociation constant (K_D) selected from the group consisting of:
 - (a) a dissociation constant (K_D) between 10^{-7} M and 10^{-8} M;
 - (b) a dissociation constant (K_D) between 10⁻⁸ M and 10⁻⁹ M;
 - (c) a dissociation constant (K_D) between 10⁻⁹ M and 10⁻¹⁰ M;
 - (d) a dissociation constant (K_D) between $10^{-10} \, M$ and $10^{-11} \, M$;
 - a dissociation constant (K_D) between 10⁻¹¹ M and 10⁻¹² M; and
 - (f) a dissociation constant (K_D) between 10⁻¹² M and 10⁻¹³ M.
 - 12. The antibody of claim 1, wherein the antibody is labeled.

- 13. The antibody of claim 12, which is labeled with a radiolabel.
- The antibody of claim 13, wherein the radiolabel is ¹²⁵I, ¹³¹I, ¹¹¹In, ⁹⁰Y,
 ⁹⁹Tc. ¹⁷⁷Lu. ¹⁶⁶Ho. ei⁻¹⁵³Sm. ²¹⁵Bi. or ²²⁵Ac.
- The antibody of claim 12, which is labeled with an enzyme, a fluorescent label, a luminescent label, or a bioluminescent label.
 - 16. The antibody of claim 1, wherein the antibody is biotinylated.

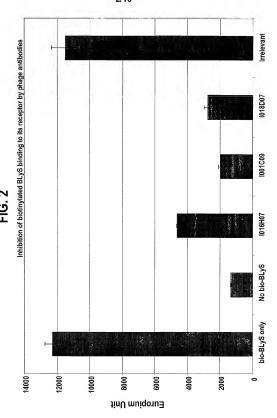
The antibody of claim 1, wherein the antibody is conjugated to a therapeutic or cytotoxic agent.

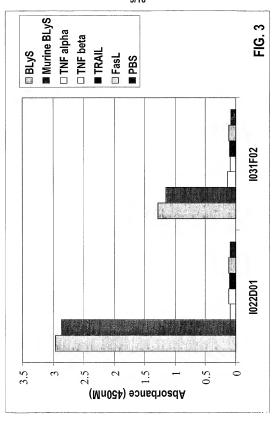
- 17. The antibody of claim 1 in a pharmaceutically acceptable carrier.
- A kit comprising the antibody of claim 1.
- 19. An isolated nucleic acid molecule encoding the antibody of claim 1.
- 20. A vector comprising the isolated nucleic acid molecule of claim 19.
- The vector of claim 20 which also comprises a nucleotide sequence which regulates the expression of the antibody encoded by the nucleic acid molecule.
 - 22. A host cell comprising the nucleic acid molecule of claim 19.
 - 23. A cell line engineered to express the antibody of claim 1.
- 24. An antibody that competes with the antibody of claim 1 for binding to a protein consisting of amino acid residues 134-285 of SEQ ID NO:3228 and a protein consisting of amino acid residues 105-250 of SEQ ID NO:3239.

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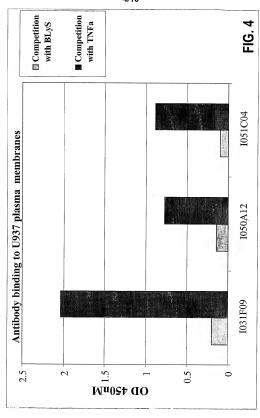


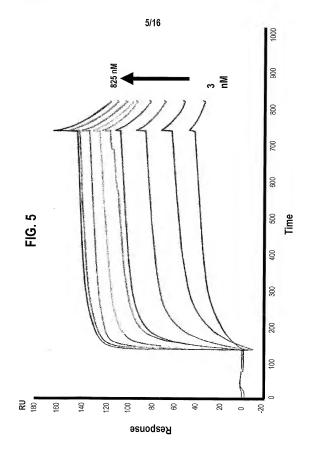
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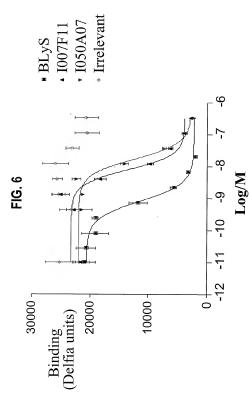


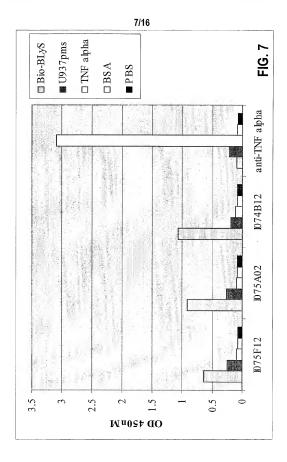


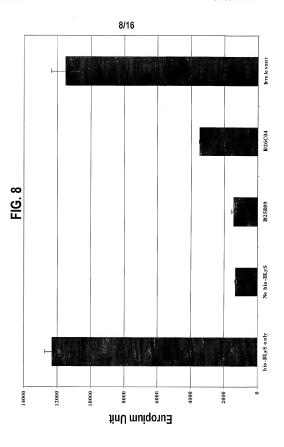




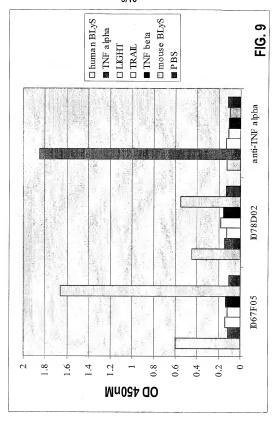


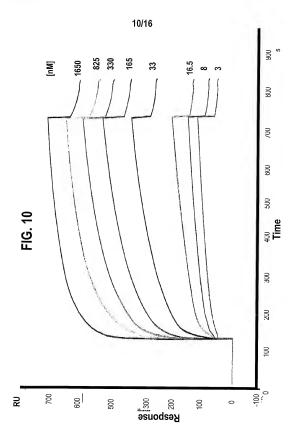






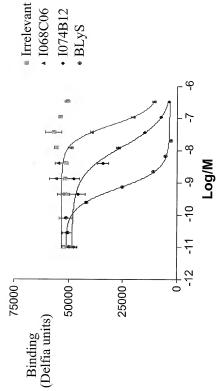
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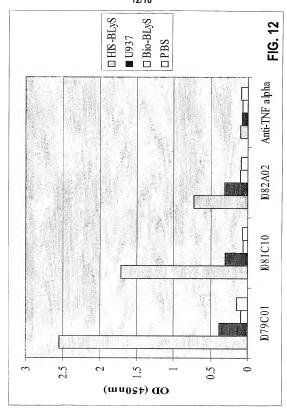


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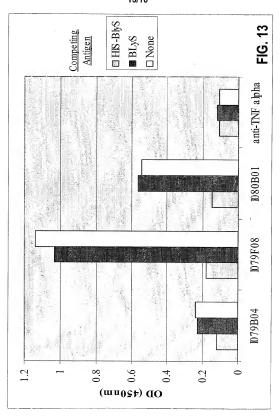




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13/16



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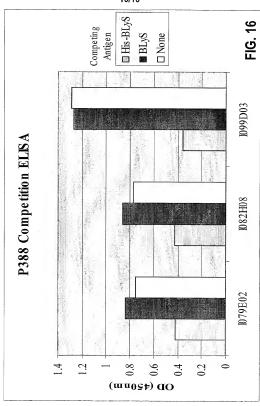
14/16

15/16

ScFv Concentration —— 50ug/mi —— 25ug/mi —— 6ug/mi —— 3ug/mi —— 3ug/mi 901 801 1082C03 Sensorgram 701 Time (Seconds) 301 201 101 200] 20] 140 120 100 9 40 180 160 Resbouse (RU)

FIG. 15

16/16



SEQUENCE LISTING

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Tyr Val Ser Trp. Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu Leu 180 . 185 190

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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Asp 20 25 30

His Ile'Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met \$35\$

Gly Trp Ile Ser Pro His His Gly Lys Thr Asn Tyr Ala Gln Lys Leu 50 60

Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Met Glu Leu Arg Ser Leu Arg Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Val Gln Met Asp Ser Glu Tyr Tyr Asp Leu Leu Thr Gly Ile $100 \\ 105 \\ 110$

Asn Val Gly Pro Tyr Tyr Phe Asp Tyr Trp Gly Lys Gly Thr Leu Val 115 120 125

Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly 135 $$140\,$

Gly Gly Ser Ser Glu Leu Thr Gln Asp Pro Ala Val Ser Val Ala Leu 145 $$150\,$, $$150\,$

Gly Gln Thr Val Arg Ile Thr Cys Gln Gly Asp Ser Leu Arg Ser Tyr $165 \ 170 \ 170$

Tyr Ala Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val 180 185 190

Ile Tyr Gly Lys Asn Asn Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser 200

Gly Ser Ser Ser Gly Asn Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln 215

Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Asn Ser Arg Asp Ser Ser Gly 235 225

Asn His Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly 250

<210> 5 <211> 249

<212> PRT <213> Homo sapiens

Glu Val Asn Leu Arg Glu Ser Gly Gly Gly Val Asp Gln Pro Gly Arg .

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 4.0 35

Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val 50 55

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 90 85

Ala Lys Asp Gly Tyr Tyr Asp Ile Leu Thr Gly Tyr Ser Tyr Tyr Gly 105 1.00

Met Asp Val Trp Gly Gln Gly Pro Met Val Ala Val Ser Ser Gly Gly - 115

Gly Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ser Glu Leu 135 140 130

Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln Thr Val Arg Ile

145 150 155 160

Thr Cys Gln Gly Asp Ser Leu Arg Ser Tyr Tyr Thr Asn Trp Phe Gln 165 170 175

Gln Lys Pro Gly Gln Ala Pro Leu Leu Val Val Tyr Ala Lys Asn Lys . 180 185 190

Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Ser Gly Asn 195 200 205

Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala Asp 210 215 220

Tyr Tyr Cys Asn Ser Arg Asp Ser Ser Gly Asn His Val Val Phe Gly 225 \$230\$ 235

Gly Gly Thr Lys Leu Thr Val Leu Gly 245

<210> 6

<211> 251

<212> PRT <213> Homo sapiens

<400> 6 Gin Val Gln Leu Val Gln Ser Gly Ala Glu Val Arg Lys Pro Gly Ser

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Ser Phe Ser Ser His 20 25

Val Phe Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Gly Ile Thr Pro Lys Phe Ala Thr Pro Asn Tyr Ala Gln Lys Phe ${}^{50}_{}$

Gln His Arg Val Thr Ile Thr Ala Asp Glu Leu Thr Arg Thr Val Phe

Met Asp Leu Ser Gly Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Gly Tyr Asp Ser Ser Ala Phe Arg Ala Phe Asp Ile Trp Gly $100 \\ 0.05$

Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly 115 \$120\$

Gly Gly Ser Gly Gly Gly Ser Ala Gln Ser Val Leu Thr Gln Pro 130 135 140

Pro Ser Val Ser Gly Ala Pro Gly Gln Arg Val Thr Ile Ser Cys Thr 145 150 160

Gly Ser Ser Ser Asn Ile Gly Ala Gly Tyr Asp Val Gln Trp Tyr Gln 165 $$170_{\odot}$$. 175

Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile His Gly Asn Asn Asn 180 185 190

Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr 195 200 205

Ser Ala Ser Leu Ala Ile Thr Gly Leu Gln Asp Glu Asp Glu Ala Asp 210 220

Tyr Tyr Cys Gln Ser Tyr Asp Ser Ser Leu Ser Phe Ser Gly Tyr Val 225 230 230

Phe Gly Thr Gly Thr Lys Val Thr Val Leu Gly

<210> 7 <211> 250

<212> PRT

<213> Homo sapiens

<400> 7 Glu Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser 1 $^{5}$ 10 $^{15}$

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Asp Thr Phe Ser His Tyr

Ala Ile Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met 35 40 45

Gly Gly Ile Ile Pro Thr Phe Asn Ala Val Lys Tyr Ala Gln Lys Phe $50 \\ 0 \\ 0 \\ 0$

Gln Gly Arg Ala Thr Ile Thr Ala Asp Gly Ser Thr Ser Thr Ala Tyr

65 70 75 80

Met Glu Leu Asn Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys 85 90

Ala Thr Ala Pro Tyr Asp Leu Leu Thr His Tyr Phe His Tyr Phe Asp $100 \hspace{0.25cm} 100 \hspace{0.25cm} 101 \hspace{0.25cm} 105 \hspace{$

Tyr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly . $115 \hspace{1.5cm} 120 \hspace{1.5cm} 125$

Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Ser Ser Glu 130 135 140

Leu Thr Gln Asp Pro Ala Val Ser Val Thr Leu Gly Gln Thr Val Arg 145 . 150 150

Ile Thr Cys Gln Gly Asp Ser Leu Arg Ser Tyr Tyr Pro Ser Trp Tyr 165 170 170

Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr Pro Lys Asn 180 185 190

Ile Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser Ser Ser Gly 195 200 205

Asn Thr Ala Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala 210 . 215 220

Ala Thr Gly Thr Lys Leu Thr Val Leu Gly 245 250

_<210> 8

<211> 256 <212> PRT

<213> Homo sapiens

<400> 8 Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ser

31n Val Gin Leu Gin Gin Ser Gry 1112 31 15 1 5 10 15

Ser Val Lys Val Ser Cys Arg Thr Ser Gly Gly Thr Phe Ser Asn Tyr

Gly Leu Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met \$35\$

- Gln Asp Arg Leu Thr Ile Ala Ala Asp Asp Leu Thr Asn Thr Thr Phe $65 \ 70 \ 75$
- Met Glu Leu Ser Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys \$85\$
- Ala Arg Ala Thr Thr Ser Gln Lys His Asn Lys Tyr Ala Tyr Tyr 100 105 110
- Phe Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser $115 \\ 120 \\ 125$
- Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser 130 140
- Ala Gln Ser Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly 145 \$150\$
- Gln Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Gly 165 \$170\$
- Tyr Asn Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys 180 185
- Leu Met Ile Tyr Glu Val Ser Asn Arg Pro Ser Gly Val Ser Asn Arg 195 200 205
- Phe Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly 210 220
- Leu Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Tyr Thr Ser 225 230 230
- Ser Ser Thr Leu Val Phe Gly Gly Gly Thr Lys Val Thr Val Leu Gly 245 250 255

<210> 9 <211> 251 <212> PRT

10

<213> Homo sapiens

 $<\!400\!>9$ Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$95\$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 $$100\$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Tle Ser Arg Leu Glu Pro Glu 210 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 10 <211> 251

<211> 251 <212> PRT

<213> Homo sapiens

<400> 10 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \ 90 \ 95$

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$ $190 \,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220 210

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg . 250 245

<210> 11 <211> 251

<212> PRT <213> Homo sapiens

<400> 11

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His . 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 75 65 70 .

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Val Trp 100

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 1.40 135 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,\,$ $185 \,\,$ $190 \,\,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205 205

Lys Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 12

<211> 251

<212> PRT

<213> Homo sapiens

 $<\!400>12$ Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.5cm} 90 \hspace{0.5cm} 95 \hspace{0.5cm}$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr $130 \ \ 135 \ \ 140 \ \ \$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 250

<210> 13

<211> 251

<212> PRT

<213> Homo sapiens

<400> 13 Gln Val Gin Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Fhe Tyr Asp Thr Leu Thr Gly Tyr Val Fhe Gln Tyr Phe $100 \\ 105$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \\ 135 \\ 140 \\$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 1.65° 1.70 1.75

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Lys Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg $^{\circ}$ 245 250

<210> 14

<211> 251

<212> PRT

<213> Homo sapiens

 $<\!400>14$ Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$45\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \ \ \ 55$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1cm} 70 \hspace{1cm} 75 \hspace{1cm} 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Val Trp \$100\$

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \ 135 \ 140 \ .$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 15 <211> 251

<212> PRT

- <213> Homo sapiens
- <400> 15 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
- Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Pne Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$
- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45 .
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $_{65}$ $_{70}$ $_{70}$
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.25in} 90 \hspace{0.25in} 95$
- Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 140
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 160
- Ala Thr Leu Ser Cys Arg Ala Ser Gin Ser Val Thr Arg Gly Trp Val . 165 170 170 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 $$180\$
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$215 . \$220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 16

<211> 251 <212> PRT

<213> Homo sapiens

 $<\!400>16$ Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val. Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Tyr Phe $100 \hspace{0.25cm} 105 \hspace{0.25cm} 110 \hspace{0.25cm}$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr $130 \,$ $135 \,$ $140 \,$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{1cm} 200 \hspace{1cm} 205$

Lys Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 17 <211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Gly Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$ \$170\$ \$175\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser .195 $200\,$ 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 18

<211> 251

<212> PRT

<213> Homo sapiens

 $<\!400\!>$ 18 Gln Val Gln Leu Val Gln Ser GÏy Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

The Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr \$180\$ \$185\$ \$190

Gly Thr Ser-Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Lys Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$210\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 19 <211> 251

<212> PRT

<213> Homo sapiens

<400> 19
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 22

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.5in} 90 \hspace{0.5in} 95$

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190 .

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser . 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$215\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 20

<211> 251

<212> PRT

<213> Homo sapiens

<400> 20

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$.

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly $^{\circ}$ 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \\ {\rm 135} \\ {\rm 140}$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 \$180\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Lys Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230225235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

24

<210> 21

<211> 251

<212> PRT

<213> Homo sapiens

<000> 21 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Gly Tyr Val Phe Gln Val Trp $100 \ \ \, 100 \ \ \, 110$

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160.

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \\ 170 \\ 175$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$ $190 \,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg $245 \ \ \, 250$

<210> 22

<211> 251 <212> PRT

<213> Homo sapiens

<400> 22 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$45\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $_{65}$ 70 75

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 105$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu-Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr \$180\$

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 220 . 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg

<210> 23 <211> 251

<212> PRT <213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val - 40 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135 140 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$ 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 24

<211> 251

<212> PRT

<213> Homo sapiens

<400> 24

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70. 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.5cm} 90 \hspace{0.5cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Val Trp 100 105 110

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \,$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 25 <211> 251

<212> PRT <213> Homo sapiens

value nomo sapien

Gin Vai Gin Leu Val Gin Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $35 \hspace{1cm} 40 \hspace{1cm} 45$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

The Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Val Trp $100\,\text{(}$

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130\,$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$ 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 26

<211> 251

<212> PRT

<213> Homo sapiens

<400> 26

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 $$ 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 . 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Tyr Phe $100 \,$ $\,$ $105 \,$ $\,$ $\,$ $110 \,$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \\ {\rm 135} \\ {\rm 140}$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $$ 150 $$ 155 $$ 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 \$185\$

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 27 <211> 251

<212> PRT

<213> Homo sapiens

<400> 27

Glin Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \ 25 \ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 . 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ $90\,^{\circ}$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Tyr Phe $100 \,$ $105 \,$ $^{\circ}110 \,$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg 145 $$150^{\circ}$$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 . 215 . 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 32

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 28

<211> 251 <212> PRT

<213> Homo sapiens

<400> 28

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30 \hspace{1.5cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \ \ 55 \ \ 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.25in} 90 \hspace{0.25in} 95$

Ala Arg Pro Phe Tyr Asp Ile Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $\,$ 150 $\,$ 155 $\,$ 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200 Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 230 235 240 Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250 <210> 29 <211> 251 <212> PRT <213> Homo sapiens <400> 29 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 2.0 Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60 Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 75 Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 Ala Arg Pro Phe Tyr Asp Ile Leu Thr Ser Tyr Val Phe Gln Tyr Phe

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg .

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \\ 170 \\ 175$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$ $190 \,$

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$ 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 30

<211> 251

<212> PRT

<213> Homo sapiens

<400> 30
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \,\,\,$

Gin Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Ile Leu Thr Arg Tyr Val Phe Gln Tyr Phe

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \\ 135 \\ 140$
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150155
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$ \$170\$ \$175\$
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190
- Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
 - Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asy Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 31

<211> 251 <212> PRT

<213> Homo sapiens

<400> 31

- Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10
- Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His
- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 . 45
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Ile Leu Thr Arg Tyr Val Phe Gln Tyr Phe $100 \\ 0.01 \\$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 32

<211> 251

<212> PRT

<213> Homo sapiens

<400> 32 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 60 Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 75 80 70 Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 Ala Arg Pro Phe Tyr Asp Ile Leu Thr Arg Tyr Val Phe Gln Tyr Phe 100 Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 120 Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135 Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150 155 Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165 Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200 195 Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220 210 Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

230 Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 33 <211> 251

225

<212> PRT

<213> Homo sapiens

 $<\!400>$ 33 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 50 \hspace{1cm} 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 . 75 80

. Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.5cm} 90 \hspace{0.5cm} 95$

Ala Arg Pro Phe Tyr Asp Ile Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \hspace{1cm} 100 \hspace{1cm} 110 \hspace{1cm}$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200 \,$ 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

<210> 34

<211> 251 <212> PRT

<213> Homo sapiens

<400> 34

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5101015

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60 \hspace{1cm}$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Tyr Phe $100 \\ 0.05$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $\,$ 215 $\,$ 220 $\,$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 35 <211> 251

<212> PRT <213> Homo sapiens

<400> 35

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 . 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$

Ala Arg Pro Phe Tyr Asp Ile Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 36

<211> 251

<212> PRT

<213> Homo sapiens

<400> 36

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$45\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu beu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.25in} 90 \hspace{0.25in} 95$

Ala Arg Pro Phe Tyr Asp Ile Leu Thr Arg Tyr Val Phe Gln Tyr Phe 100 . 105 . 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

- Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg 145 150150155
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 $$185\$
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
- Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 37 <211> 251

<211> 251 <212> PRT

<213> Homo sapiens

<400> 37

- Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15
- Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30
- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.5cm} 90 \hspace{0.5cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 105 \\ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg 145 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr \$180\$ \$185\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 38

<211> 251

<212> PRT

<213> Homo sapiens

<400> 38

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$45\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Gly Tyr Tyr $100 \ \ \, 105 \ \ \, 110$

Leu Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 . 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $\,$ 215 $\,\cdot\,$ 220 $\,$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 39 <211> 251

<211> 251 <212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$ \$170\$ \$175\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Ala Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 40

<211> 251 <212> PRT

<213> Homo sapiens

<400> 40

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 . 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Val Trp 100 105 110

Val Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$ $190 \,$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$210\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 41

<211> 251 <212> PRT

<213> Homo sapiens

<400> 41

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30 \hspace{1.5cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Ile Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 48

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr $180 \,$ $185 \,$ 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser-Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 42 <211> 251

<211> 231 <212> PRT

<213> Homo sapiens

<400> 42

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60 \hspace{1cm}$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 105 \\ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \hspace{1cm} 185 \hspace{1cm} 190 \hspace{1cm}$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200

Lys Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 43 <211> 251

<212> PRT

<213> Homo sapiens

400> 43

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 50

75

80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

70

65

90 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150 155 145

Ala Thr Leu Ser Cvs Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 225 230

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 44

<211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1.0 1

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25

Gly	Ile	Ser 35	Trp	Val	Arg	Gln	Ala 40	Pro	Gly	Gln	Gly	Leu 45	Glu	Trp	Val
Gly	Trp 50	Ile	Ser	Gly	His	Asp 55	Asp	Ser	Thr	Lys	Tyr 60	Ala	Gln	Lys	Phe
Gln 65	Gly	Arg	Val	Thr	Met 70	Thr	Ala	Asp	Thr	Ser 75	Thr	Ser	Thr	Ala	Tyr 80
Ile	Glu	Leu	Arg	Ser 85	Leu	Lys	Ser	Asp	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	Cys
Ala	Arg	Pro	Phe 100	Tyr	Asp	Thr	Leu	Thr 105	Ser	Tyr	Va1	Phe	Gln 110	Tyr	Phe
Asp	His	Trp 115	Gly	Gln	Gly	Thr	Met 120	Val	Thr	Va1	Ser	Ser 125	Gly	Gly	Gly
Gly	Ser 130	Gly	Gly	Gly	Gly	Ser 135	Gly	Gly	Gly	Gly	Ser 140	Ala	Leu	Glu	Thr
Thr 145	Leu	Thr	Gln	Ser	Pro 150	Asp	Thr	Leu	Ser	Leu 155	Ser	Pro	Gly	Lys	Arg 160
Ala	Thr	Leu	Ser	Cys 165	Arg	Ala	Ser	Gln	Ser 170	Val	Thr	Arg	Gly	Trp 175	Val
Ala	Trp	Tyr	Gln 180	Gln	Lys	Pro	Gly	Gln 185	Ala	Pro	Arg	Leu	Leu 190	Met	Tyr
G1	m1		3		310	mlow	C111	17a 1	Dro	a en) ra	Pho	Car	G11r	Ser

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 240 225 . 230

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 45 <211> 251

<212> PRT

<213> Homo sapiens

<400> 45 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30 \hspace{1.5cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Arg Tyr Val Phe Gln Tyr Phe $100 \,$ $105 \,$ $110 \,$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 46 <211> 251

<211> 251 <212> PRT

<213> Homo sapiens

<400> 46

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \ \ 55$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 150 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \\ 170 \\ 175$

Ala Tro Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr . 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 47 <211> 251

<211> 251 <212> PRT

<213> Homo sapiens

<400> 47

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 - 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Pro Arg Val 100 105 110

Ile Pro Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$ $190 \,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$ 205 .

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$210\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg.Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg $245\,{}_{\odot}$ $250\,$

<210> 48

<211> 250

<212> PRT <213> Homo sapiens

<400> 48

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.25in} 90 \hspace{0.25in} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Cys Arg Pro His
100 105 110

Phe Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 \$120\$

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 150 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala \$165\$

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly $180 \ \ \, 185 \ \ \,$

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230235235

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 49 <211> 250

<212> PRT <213> Homo sapiens

<400> 49

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 .5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $_{50}$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 57

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Arg Cys Pro Tyr $100 \hspace{1cm} 105 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$

Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 150 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly $180 \ \ 185 \ \ 190$

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu
195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Met Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Fro Arg Thr Phe 225 230235235

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 50

<211> 250

<212> PRT

<213> Homo sapiens

<400> 50

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30$

G1y	I1e	Ser 35	Trp	Val	Arg	Gln	Ala 40	Pro	Gly	Gln	Gly	Leu 45	Glu	Trp	Val
Gly	Trp 50	Ile	Ser	Gly	His	Asp 55	Asp	Ser	Thr	ГЛа	Tyr 60	Ala	Gln	Lys	Phe
Gln 65	Gly	Arg	Val	Thr	Met 70	Thr	Ala	Asp	Thr	Ser 75	Thr	Ser	Thr	Ala	Tyr 80
Ile	Glu	Leu	Arg	Ser 85	Leu	Lys	Ser	Asp	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	Cys
Ala	Arg	Pro	Phe 100	Tyr	Asp	Thr	Leu	Thr 105	Ser	тух	Val	Phe	Arg 110	Pro	Asp
Leu	Trp	G1y 115	Gln	Gly	Thr	Met	Val 120	Thr	Val	Ser	Ser	Gly 125	Gly	Gly	Gly
Ser	Gly 130	Gly	Gly	Gly	Ser	Gly 135	Gly	Gly	Gly	Ser	Ala 140	Leu	Glu	Thr	Thr
Leu 145	Thr	Gln	Ser	Pro	Asp 150	Thr	Leu	Ser	Leu	Ser 155	Pro	Gly	Glu	Arg	Ala 160
Thr	Leu	Ser	Cys	Arg 165		Ser	Gln	Ser	Val 170	Thr	Arg	Gly	Trp	Val 175	Ala
Trp	Tyr	Gln	Gln 180		Pro	Gly	Gln	Ala 185	Pro	Arg	Leu	Leu	Met 190	Tyr	Gly
Thr	Ser	Arg 195		Ala	Thr	Gly	Val 200		Asp	Arg	Phe	Ser 205	Gly	Ser	Glu
Ser	Gly 210		Asp	Phe	Thr	Leu 215		Ile	Ser	Arg	Leu 220	Glu	Pro	Glu	Asp
Phe	Ala	Val	Tyr	Tyr	Cys	Gln	Gln	Tyr	Ala	Thr	Ser	Pro	Arg	Thr	Phe

230 Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 51 <211> 250

225

<212> PRT

235

<213> Homo sapiens

 $<\!400>51$ Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Lys Ser Met Pro $100 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$

Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 155

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala $165 \hspace{1cm} 170 \hspace{1cm} 170 \hspace{1cm} 175 \hspace{1cm}$

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 60

225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 52 <211> 250 <212> PRT

<213> Homo sapiens

 $<\!400\!>52$ Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Pro Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$

Thr Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.5cm} 90 \hspace{0.5cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Phe Leu Tyr 100 105 110

Cys Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 150 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala $165 \hspace{1cm} 170 \hspace{1cm} 170 \hspace{1cm} 175 \hspace{1cm}$

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 53 <211> 250

<211> 230

<213> Homo sapiens

<400> 53

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $35 \ \ 40 \ \ 45$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60 \hspace{1cm}$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.5cm} 90 \hspace{0.5cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Val Pro Ser $100 \ \ \, 105 \ \ \, 110$

Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 \$120\$

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 140

Leu Thr Gln Ser Pro Asp Ala Leu Ser Leu Ser Pro Gly Glu Arg Ala

145 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly . 180 $$185\$

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 $200\,$

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 $$ 230 $$ 235 $$ 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 54

<211> 250

<212> PRT <213> Homo sapiens

<213> Homo sapien

<400> 54

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 $$ 10 $$ 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Gly Ile His Gly $100 \\ 0.05$

Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala $145 \hspace{1.5cm} 150 \hspace{1.5cm} 155 \hspace{1.5cm} 160 \hspace{1.5cm}$

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala $165 \ \ 170 \ \ 175$

Trp Tyr Gln Gln Lys Fro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly $180 \,$ $185 \,$ 190 $\,$

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 $200\,$ 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230235

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg \$245\$

<210> 55

<211> 251

<212> PRT

<213> Homo sapiens

<400> 55

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \ 25 \ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$. \$40

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 64

65 70 75 8

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Cys Ser Pro 100 105 110

Pro Arg Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150150150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 56

<211> 250

<212> PRT

<213> Homo sapiens

<400> 56 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 -Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 60 Gin Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95 Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Cys Tyr Pro Pro 100 105 Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr Thr 135 Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 155 150 Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 170 165 Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 185 190 Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 205 200 195 Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 215 210 Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 235 240 225

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 57 <211> 250 <212> PRT

<213> Homo sapiens

 $<\!400>57$ Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala $_1$ $_5$ $_{10}$ $_{10}$

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1.5cm} 55 \hspace{1.5cm} 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Pro Leu Leu 100 \$105\$

Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala \$165\$

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly $180 \ \ \, 185 \ \ \, 190$

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 225

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe

67

225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 58

<211> 250

<212> PRT <213> Homo sapiens

<400> 58

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \\ 90 \\ 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ala Leu Tyr Arg $100 \,$ $105 \,$ $110 \,$

Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 \$120\$

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala $145 \\ 150 \\ 150 \\ 160$

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 \cdot 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 59

<211> 250 <212> PRT

<213> Homo sapiens

<400> 59

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 $$ 5 $$ 10 $$ 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ \$40\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \ \ 55 \ \ 60$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.5cm} 90 \hspace{0.5cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Arg Ala Ser Phe 100 105 110

Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala

145 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 . 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230235235

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 60

<211> 250

<212> PRT

<213> Homo sapiens

<400> 60 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 - 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Cys Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys . 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Cys Thr Pro Val 100 105 110

Pro Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr $130 \,$ $135 \,$ $140 \,$

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly $180 \ \ 185 \ \ 190$

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 220

Phe Ala Ala Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 \$230\$ 235

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 61 <211> 251

<212> PRT <213> Homo sapiens

<ZI3> Homo sapien

<400> 61 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$. $$40^{\circ}$$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60 \hspace{1cm}$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

71

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.25in} 90 \hspace{0.25in} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Trp Pro Ser Phe $100 \\ 0.05$

Phe Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly G1u Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$ 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 62

<211> 250

<212> PRT

<213> Homo sapiens

<400> 62 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly	Ile	Ser 35	Trp	Val	Arg	Gln	Ala 40	Pro	Gly	Gln	Gly	Leu 45	Glu	Trp	Val		
Gly	Trp 50	Ile	Ser	Gly	His	Asp 55	Asp	Ser	Thr	Lys	Tyr 60	Ala	Gln	Lys	Phe		
Gln 65	Gly	Arg	Val	Thr	Met 70	Thr	Ala	Asp	Thr	Ser 75	Thr	Ser	Thr	Ala	Tyr 80		
Ile	Glu	Leu	Arg	Ser 85	Leu	Lys	Ser	Asp	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	Cys		
Ala	Arg	Pro	Phe 100	Tyr	Asp	Thr	Leu	Thr 105	Ser	Tyr	Val	Thr	Pro 110	Arg	Gly		
Tyr	Trp	Gly 115	Gln	Gly	Thr	Met	Val 120	Thr	Val	Ser	Ser	Gly 125	Gly	Gly	Gly		
Ser	Gly 130	Gly	Gly	Gly	Ser	Gly 135	Gly	Gly	Gly	Ser	Ala 140	Leu	Glu	Thr	Thr		
Leu 145	Thr	Gln	Ser	Pro	Asp 150	Thr	Leu	Ser	Leu	Ser 155	Pro	Gly	Glu	Arg	Ala 160		
Thr	Leu	Ser	Cys	Arg 165	Ala	Ser	Gln	Ser	Val 170	Thr	Arg	Gly	Trp	Val 175	Ala		
Trp	Tyr	Gln	Gln 180	Lys	Pro	Gly	Gln	Ala 185	Pro	Arg	Leu	Leu	Met 190	Tyr	Gly		
Thr	Ser	Arg 195	Arg	Ala	Thr	Gly	Val 200	Pro	Asp	Arg	Phe	Ser 205	Gly	Ser	Glu		
Ser	Gly 210	Thr	Asp	Phe	Thr	Leu 215	Thr	Ile	Ser	Arg	Leu 220	Glu	Pro	Glu	Asp		
Phe 225	Ala	Val	Tyr	Tyr	Cys 230	Gln	Gln	Tyr	Ala	Thr 235	Ser	Pro	Arg	Thr	Phe 240		
Gly	Gln	Gly		Arg 245		Glu	Ile	Lys	Arg 250								

<210> 63 <211> 250 <212> PRT

<213> Homo sapiens

<400> 63
Glr Val Gln Leu Val Gln Ser Val Val Glu Val Arg Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ser Ser Leu Leu 100 \$105\$

Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe

235

240

230

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 64

225

<211> 251

<212> PRT <213> Homo sapiens

<400> 64 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 85 .

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Leu Leu Pro 105 100

Leu Cys Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 120

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 140 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 150 145

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 190 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200 \ \ 205$

- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $\,$ 220 $\,$
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 . 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg . 245 250

<210> 65

<211> 251

<212> PRT

<213> Homo sapiens

<400> 65

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $_{50}$
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Pro Ser 100 105 110
- Phe Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 76

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \\ 170 \\ 175$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$ $190 \,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $\,$ 215 $\,$ 220 $\,$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 66

<211> 250

<212> PRT

<213> Homo sapiens

<400> 66

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 $$ 5 $$ 10 $$ 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \ 25 \ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60 \hspace{1cm}$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1cm} 70 \hspace{1cm} 75 \hspace{1cm} 80$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Thr Ser Thr

Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115

Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr Thr 135

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 155 150

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Thr 170 165

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 185

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 200 195

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 235 230 225

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 67 <211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10 5

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 60 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 78

75 8.0 70 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Ser Cys Ser 105

Trp Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 125 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135 130

Thr Leu Thr Gln Ser Leu Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 220 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 230 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 250 245

<210> 68

~211> 251 <212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 15 10 1

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 2Ò .

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ser Ala Leu Pro 105 1.00

Pro Pro Trp Gly Glm Gly Thr Met Val Thr Val Ser Ser Gly Gly 120

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 150 145

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 205 200 195

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220 210

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 230 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 250 245

<210> 69 <211> 250

<212> PRT

<213> Homo sapiens

<400> 69 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \ \ 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 BO

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Cys Arg His Leu $100 \hspace{1cm} 105 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$

Phe Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 150 150

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala \$165\$

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly
180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu $195 \hspace{1cm} 200 \hspace{1cm} 205$

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe

225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 70

<211> 251 <212> PRT

<213> Homo sapiens

 $<\!400>70$ Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asp His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $$45\ .$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 . 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Val Ser Phe Pro

Ser Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr $130 \ 135 \ 140 \$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \hspace{1cm} 170 \hspace{1cm} 175 \hspace{1cm}$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 \$200\$

- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Fro Glu 210 \$215\$
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 71

<211> 251

<212> PRT

<213> Homo sapiens

<400> 71 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $_{20}$

Gly Val Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Met Gly Val Thr $100 \ 105 \ 110$

Pro Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

8.

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Arg Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 180 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{1cm} 200 \hspace{1cm} 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg . 245 250

<210> 72

<211> 251 <212> PRT

<213> Homo sapiens

<400> 72 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $\frac{35}{40}$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \\ 0 \\ 55$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Phe Arg Pro $100 \ \ 105 \ \ \ 110$

Val Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 120 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 160 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 205 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 220 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Ser Arg Thr 235 225 230

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 250 245

<211> 250 <212> PRT <210> 73

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 45 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 60 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

85

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Ser Val Gly 100 105

Gly Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 \$120\$

Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr $130 \ 135 \ 140 \$

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 155

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala $165 \hspace{1cm} 170 \hspace{1cm} 175$

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 \$180\$

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 \$200\$

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg \$245\$

<210> 74

<211> 250

<212> PRT

<213> Homo sapiens

 $<\!400>74$ Gln Val Gln Leu Val Gln Pro Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 . 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 70

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys . 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Pro Thr Arg 105 110 100

His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly . 115 120

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 135 130

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 155 150 145

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 200 195

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 . 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 235 225 230

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 75 <211> 250

<212> PRT

<213> Homo sapiens

<400> 75 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \\ 0 \\ 55$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \\ 70 \\ 75$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.5cm} 90 \hspace{0.5cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Arg Ser Arg $100 \\ 100 \\ 110$

Asp Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 \$120\$

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala $165 \hspace{1cm} 170 \hspace{1cm} 170 \hspace{1cm} 175 \hspace{1cm}$

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly $180 \\ 185 \\ 190 \\$

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 . 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 210 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe

230 235 240 225

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 76

<211> 250

<212> PRT <213> Homo sapiens

<400> 76

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala . 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 2.5

Gly Ile Ser Arg Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 75 70

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Pro Leu Leu Pro 100 110 105

Pro Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 115

Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr Thr 135 . 130

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 150 155 145

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 200

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 220 215

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 235 240 230 225

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 250 245

<210> 77 <211> 250

<212> PRT <213> Homo sapiens

<400> 77

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 15 10 5

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 4.0 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Arg Cys Val 105 100

Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr Thr 135 140 130

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 90

160 150 155 145

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 170 165

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 185

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 205 200

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 215 210

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 230 235 225

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 78

<211> 250

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10 5

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 2.0

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val His Pro Ser Arg 105 . 110 100

Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 115

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 135 130

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 150 155

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 170 165

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 185

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 235 230 225

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 79 <211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1.5 10 1 5

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 92

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Arg Leu Pro $100 \hspace{1cm} 100 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$

Pro Gln Trp Gly Gln G1y Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $$ 150 $$ 155 $$ 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \hspace{1cm} 170 \hspace{1cm} 175 \hspace{1cm}$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 80

<211> 250

<212> PRT

<213> Homo sapiens

<400> 80 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$45\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \ \ 55 \ \ .$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1cm} 70 \hspace{1cm} 75 \hspace{1cm} 75$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys . 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Gly Pro Tyr Gly $100 \ \ 105 \ \ 110$

Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 \$120\$

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Lys 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 81 <211> 250 <212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \\ 70 \\ 75$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$95\$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Thr Thr Pro Cys $100 \\ 100 \\ 101 \\ 105$

Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 . 150 . 155 . 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu \$195\$

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 220

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe

225 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 82 <211> 244

<211> 244 <212> PRT

<213> Homo sapiens

<400> 82 Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg

1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr $20 \\ 25 \\ 30$

Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Asp Trp Val \$35\$

Ser Ala Ile Thr Trp Asn Ser Gly His Ile Asp Tyr Ala Asp Ser Val 50 60

Glu Gly Arg Phe Ala Val Ser Arg Asp Asn Ala Lys Asn Ala Leu Tyr $65 \ 70 \ 75 \ 80$

Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95.

Thr Lys Ala Ser Tyr Leu Ser Thr Ser Ser Ser Leu Asp Asn Trp Gly 100 105

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly 115 125 120 125

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro 130 140

Ser Ser Leu Ser Ala Ser Ile Gly Asp Arg Val Thr Ile Thr Cys Arg 145 150 155 160

Ala Ser Gln Gly Ile Arg Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro 165 170 175

Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Thr Leu Gln Ser 180 185 190

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr 195 200

- Gln Lys Tyr Asn Ser Ala Pro Tyr Ala Phe Gly Gln Gly Thr Lys Val 225 230 220 235

Glu Ile Lvs Arg

<210> 83

<211> 251

<212> PRT

<213> Homo sapiens

 $<\!400>83$ Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 1511

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asp His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1cm} 70 \hspace{1cm} 75 \hspace{1cm} 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 105$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

160 155 150 145

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Thr Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 220 215 210

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 230 235 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 84

<211> 251

<212> PRT

<213> Homo sapiens

<400> 84

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10 5

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 35

Gly Trp Ile Ser Gly His Gly Asp Ser Thr Lys Tyr Ala Gln Lys Phe . 55 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Pro Phe Leu 105 100

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125.

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{1.5cm} 200 \hspace{1.5cm} 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 85

<211> 251 <212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 99

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys ... 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Ile Tyr $100 \\ 100 \\ 105$

Pro His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 - 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 . 170 . 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 \$200\$

Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 86

<211> 251

<212> PRT

<213> Homo sapiens

 $<\!400>$ 86 Gin Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 1 5 10

Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \ \ 55 \ \ \ 60$
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \ 70 \ 75 \ 80$
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$95\$
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Asn Tyr Val Phe Glu Tyr Tyr 100 105 110
- Ala Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser \$195\$
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg $$ 245 $$ 250

<210> 87

<211> 251

<212> PRT

<213> Homo sapiens

<400> 87 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60$
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Leu Tyr Tyr $100 \hspace{1cm} 105 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$
- Leu His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \,$ $135 \,$ $140 \,$
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{1cm} 200 \hspace{1cm} 205 \hspace{1cm}$
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 88

<211> 251

<212> PRT <213> Homo sapiens

 $<\!400>88$ Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 , 10 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$95\$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 105 \\ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \ \ 135 \ \ 140 \ \ \$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$155\$ \$170\$ \$175\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile-Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Pro Thr 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 89

<211> 251 <212> PRT

<213> Homo sapiens

<400> 89

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 15 5 1.0

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe , 60 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr . 70 - 75

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 9.0

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Met Tyr Phe 105 100

Pro His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 125 120 1.15

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135 140 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 104

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \hspace{1cm} 170 \hspace{1cm} 170 \hspace{1cm} 175 \hspace{1cm}$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 $^{\circ}$ 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$215\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 $$230\ ^{\circ}$$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 90

<211> 251

<212> PRT

<213> Homo sapiens

<400> 90 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly . 120

- Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135 140
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 160 150 145
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 175 165
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 180
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 220 215
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 225

Phe Gly Gln Gly Thr Arg Leu Glu İle Lys Arg . 250 245

<210> 91

<211> 251

<212> PRT <213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20

- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 60 50
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 106

65 70 75 8

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1.5cm} 90 \hspace{1.5cm} . \hspace{1.5cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \hspace{1cm} 170 \hspace{1cm} 175$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 220 .

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Val Ile Arg Arg 245 250

<210> 92

<211> 251

<212> PRT

<213> Homo sapiens

<400> 92

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly	Ile	Ser 35	Trp	Val	Arg	Gln	Ala 40	Pro	Gly	Gln	Gly	Leu 45	Glu	Trp	Val
Gly	Trp 50	Ile	Ser	Gly	His	Asp 55	Asp	Ser	Thr	Lys	Tyr 60	Ala	Gln	Lys	Phe
Gln 65	Gly	Arg	Val	Thr	Met 70	Thr	Ala	Asp	Thr	Ser 75	Thr	Ser	Thr	Ala	Tyr 80
Ile	Glu	Leu	Arg	Ser 85	Leu	Lys	Ser	Asp	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	Cys
Ala	Arg	Pro	Phe 100	Tyr	Asp	Thr	Leu	Thr 105	Ser	Tyr	Val	Phe	Asp 110	Tyr	Tyr
Ala	Ser	Trp 115	Gly	Gln	Gly	Thr	Met 120	Val	Thr	Val	Ser	Ser 125	Gly	Gly	Gly
Gly	Ser 130		Gly	Gly	Gly	135	Gly	Gly	Gly	Gly	Ser 140	Ala	Leu	Glu	Thr
Thr 145		Thr	Gln	Ser	Pro 150	Asp	Thr	Leu	Ser	Leu 155	Ser	Pro	Gly	Glu	Arg 160
Ala	Thr	Leu	Ser	Cys 165	Arg	Ala	Ser	Gln	Ser 170	Val	Thr	Arg	Gly	Trp 175	Val
Ala	Trp	Tyr	Gln 180		Lys	Pro	Gly	Gln 185	Ala	Pro	Arg	Leu	Leu 190	Met	Tyr
Gly	Thr	Ser 195		Arg	Ala	Thr	G1y 200	Val	. Pro	Asp	Arg	Phe 205	Ser	Gly	Ser
Glu	Ser 210		Thr	Asp	Phe	215		Thr	: Ile	e Ser	220	Leu	Glu	Pro	Glu
Asp 225	Phe	e Ala	ı Val	Tyr	Tyr 230	Cys	Glr	Glr	туг	Ala 235	Thr	Ser	Pro	Arg	Thr 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 250 245

<210> 93 <211> 251 <212> PRT

225

<213> Homo sapiens

<400> 93 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1cm} 70 \hspace{1cm} 75 \hspace{1cm} 80 \hspace{1cm}$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $$90\ .$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Pro Phe Leu 100 105 110 110 ...

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 \$170\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr . 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 . 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$215\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Ser Arg 245 250

<210> 94 <211> 251 <212> PRT <213> Homo sapiens

<400> 94 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala $1 \\ 1 \\ 5 \\ 10$

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20\ .$ $25\ .$ $30\ .$

Ser Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$45\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1.5cm} 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 70 75$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \ 105 \ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 220

Asp Phe Ala Val Tyr Tyr Cys Gin Gln Tyr Ala Thr Ser Pro Arg Thr $225 \\ 230 \\ 235$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 95 <211> 251

<211> 231 <212> PRT

<213> Homo sapiens

 $<\!400>95$ Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Val Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 . 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$95\$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Glu Tyr Tyr 100 105 110 110

Ser Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly . 115 120 . 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

111

145 150 . 155 16

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$

Gly Thr Ser Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$ 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 96

<211> 251

<212> PRT <213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 . 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 \$105\$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 11.5 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 . 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu $210 \\ 215 \\ 220$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 97 <211> 251

<212> PRT <213> Homo sapiens

<213> Homo sapien

(440) 97 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $35 \qquad \qquad 40 \qquad 45$

Gly Trp Ile Ser Gly His Asp Asp Ser Ala Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$95\$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 0.05$.

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 $^{\circ}$ 120 $^{\circ}$ 125

Gly Ser Gly Gly Gly Gly Ser Gly Glý Gly Ser Ala Leu Glu Thr $130 \ \ \, 135 \ \ \,$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 . 250

<210> 98

<211> 251

<212> PRT

<213> Homo sapiens

<000> 98 Gin Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

. Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly Tyr Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \ \ 55 \ \ 60$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95 \hspace{1cm} .$

Leu Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 \$180\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 . 250

<210> 99 <211> 251

<212> PRT

- <213> Homo sapiens
- <400> 99 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15
- Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30
- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \ \ . \ \ 55 \ \ 60$
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \\ 70 \\ 75$
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \,$ $105 \,$
- Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Lys Arg $145 \\ 150 \\ 155 \\ 160$
- Ala Thr Leu Pro Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165~{\rm m}$ $170~{\rm m}$ 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr \$180\$ \$185\$ \$190
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 . 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 100 <211> 250

<211> 250 <212> PRT

<213> Homo sapiens

<400> 100

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Pro Leu Asp $100~\cdot~105~$

Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 120 125

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr $_{130} \\ \hspace*{1.5cm} 135 \\ \hspace*{1.5cm} 140 \\ \hspace*{1.5cm}$

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 145 150 155 160

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 180 185 190

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 200

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 215

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 230 235 240

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 101

<211> 251

<212> PRT

<213> Homo sapiens

<400> 101

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10 1

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Glu Tyr Ala Gln Lys Phe 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr . 75 70

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Tyr Phe Tyr 110 105

Pro Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 125 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 140 135 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 118

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$ \$170\$ \$175\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 \$200\$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$215\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 102

<211> 251

<212> PRT <213> Homo sapiens

<400> 102 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \ \ 55 \ \ .$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Asn Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 105$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \ 135 \ 140 \$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \hspace{1cm} 170 \hspace{1cm} 170 \hspace{1cm} 175 \hspace{1cm}$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 \$185\$

Gly Thr Ser Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$215\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 103 <211> 251

<212> PRT

<213> Homo sapiens

<400> 103
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20\,$. $25\,$ 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 55 60.

Gln Gly arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 120

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \ \ 105 \ \ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 11.5 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Val Lys Arg 245 250

<210> 104

<211> 251

<212> PRT

<213> Homo sapiens

 $<\!400>104$ Gln Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 15 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly	Ile	Ser 35	Trp	Val	Arg	Gln	Ala 40	Pro	Gly	Gln	Gly	Leu 45	Glu	Trp	Val
Gly	Trp 50	Ile	Ser	Gly	His	Asp 55	Asp	Ser	Thr	Lys	Tyr 60	Ala	Gln	Lys	Phe
Gln 65	Gly	Arg	Val	,Thr	Меt 70	Thr	Ala	Asp	Thr	Ser 75	Thr	Ser	Thr	Ala	Tyr 80
Ile	Glu	Leu	Arg	Ser 85	Leu	Lys	Ser	Asp	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	Cys
Ala	Arg	Pro	Phe 100		Asp	Thr	Leu	Thr 105	Ser	Tyr	Val	Phe	Gln 110	Tyr	Phe
Asp	His	Trp 115		Gln	Gly	Thr	Met 120	Val	Thr	Val	Ser	Ser 125	Gly	Gly	Gly
Gly	Ser 130	Gly	Gly	Gly	Gly	Ser 135	Gly	Gly	Gly	Gly	Ser 140	Ala	Leu	Glu	Thr
Thr		Thr	Gln	Ser	Pro 150	Asp	Thr	Leu	Ser	Leu 155	Ser	Pro	Gly	Glu	Arg 160
Ala	Thr	Leu	Ser	Cys 165	Arg	Ala	Ser	Gln	Ser	Val	Thr	Arg	Gly	Trp 175	Va]
310	(Flance)	(Da roo	Cln	G1n	Tare	Pro	Glv	Gln	Ala	Pro	Ara	Leu	Leu	Met	Туз
VTG	110	131	180		210			185					190		
Gly	Thr	Ser 195		Arg	.Thr	Thr	Gly 200		Pro	Asp	Arg	Phe 205	Ser	Gly	Ser
Glu	Ser 210		Thr	Asp	Phe	Thr 215		Thr	Ile	Ser	Arg 220	Leu	Glu	Pro	Gl
	nt.	21-	- Tra 1	m	. The gree	Cyc	G1~	G1-	T\22	Ala	Thr	Ser	Pro	Aro	Th:
225		: Ala	ı vaı	. ıyı	230	CYS	GIII	. 611	. TAT	235		Jul			24

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg $245 \hspace{1cm} 250 \hspace{1cm}$

<210> 105 <211> 251 <212> PRT

<213> Homo sapiens

 $<\!400>105$ Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \ \ \, 105$. $\ \ \, 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$215\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 123

240 235 230 225

Phe Gly Gln Gly Thr Arg Leu Glu Val Lys Arg 245

<210> 106

<211> 251 <212> PRT

<213> Homo sapiens

<400> 106

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1.0

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 70

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 . 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Tyr Tyr 105 100

Ala Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 125 120 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135 140 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150 155 145

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 175 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 \$200\$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 225

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg $245 \ \ 250$

<210> 107 <211> 250

<212> PRT

<213> Homo sapiens

<400> 107

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 7075$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.5cm} 90 \hspace{0.5cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Pro Pro Ser 100 105 110

Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly 115 \$120\$

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 130 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala

145 150 155 16

Thr Leu Ser Cys arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165 170 175

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly $180 \ \ 185 \ \ 190$

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200 205

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp $210 \hspace{1cm} 215 \hspace{1cm} 220 \hspace{1cm}$

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230 235

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 108

<211> 251

<212> PRT

<213> Homo sapiens <400> 108

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 ...

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \,$ $105 \,$ $110 \,$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120

- Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135
- Thr Pro Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150 155
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 210
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 240 230 225
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 .

<210> 109 <211> 251

<212> PRT

<213> Homo sapiens

<400> 109

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10 5

- Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 2.0 2.5
- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 45
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Arg Lys Phe 50 55 60
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 127

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 001 \\ 105$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \ \ 135 \ \ 140$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 \$180\$

Gly Thr Ser Arg Arg Mla Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 110 <211> 251

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe . $50 \ \ \,$ $60 \ \ \,$
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 7575$
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 $$105\ \ \, 110\ \ \, 110$
- Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \,$ $170 \,$ $175 \,$
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 111 <211> 248

<212> PRT

<213> Homo sapiens

<400> 111 Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala Ser Val Lys 1 10 15

Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His Gly Tle Ser $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val Gly Trp Ile 35 45

Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe Gln Gly Arg $50 \ \ 60 \ \ \$

Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr Ile Glu Leu 65 70 75 80

Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys Ala Arg Pro $95 \ 95$

Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe Asp His Trp $100 \ 105 \ 110$

Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly 115 120 . 125

Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr Leu Thr 130 135 140

Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu 145 150 160

Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala Trp Tyr $165 \hspace{1cm} 170 \hspace{1cm} 170 \hspace{1cm} 175 \hspace{1cm}$

Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly Thr Ser $180 \ \ 185 \ \ \ \ 190$

Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu Ser Gly 195 200 . 205

Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala 210 \$215\$

Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe Gly Gln

225 230 235 240

Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 112 <211> 251

<212> PRT <213> Homo sapiens

<400> 112 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala $\frac{1}{1}$ $\frac{1}{5}$ $\frac{10}{10}$ $\frac{15}{10}$

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Fhe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Tyr Tyr 100 105 110

Leu Tyr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 175 175 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 . 185 . 190 .

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 113

<211> 251 <212> PRT

<213> Homo sapiens

<400> 113

- Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala $1 ext{5}$ $10 ext{10}$
- Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$
- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$. \$40\$
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
 50 55
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe G1n Tyr Phe $100 \,$ $105 \,$ $110 \,$
- Asp His Trp Gly Gln Gly Thr Ile Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \hspace{1cm} 170 \hspace{1cm} 170 \hspace{1cm} 175 \hspace{1cm}$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205 . . ,

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$215\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 114

<211> 251

<212> PRT

<213> Homo sapiens

<400> 114
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \\ 70 \\ 70 \\ 75$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Cys $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \ \ 105 \ \ \ 110$

Asp His Trp Gly Gln Gly Thr Ile Val Thr Val Ser Ser Gly Gly Gly 120 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 160 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 220 210 215

· Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asp Thr Ser Pro Arg Thr 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 115

<211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 2.0

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Thr Asp Thr Ser Thr Ser Thr Ala Tyr 134

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr $130 \\ 135$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$. $205\,$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 116

<211> 251

<212> PRT

<213> Homo sapiens

 $<\!400>116$ Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ . \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $^{\circ}$ 65 $^{\circ}$ 70 $^{\circ}$ 75 $^{\circ}$ 80 $^{\circ}$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 . 90 . 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \,$ $105 \,$ $110 \,$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$ \$170\$ \$175\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr \$180\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Ala Ile Ser Arg Leu Glu Pro Glu 210 215 220

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 117 <211> 251

<211> 231

<213> Homo sapiens

<400> 117 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$45\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \ \ 55 \ \ 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Asp Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \,$ $135 \,$ $140 \, \cdot$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Arg Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Cys Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

230 240 235 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 118 <211> 251

<212> PRT

<213> Homo sapiens

<400> 118

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1.0 5

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 -20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 75

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 - 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 125 . 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200 205 Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220 Asp Ser Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 240 230 Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250 <210> 119 <211> 251 <212> PRT <213> Homo sapiens <400> 119 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10 15 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 20` Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 60 Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 85 Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

135

130

140

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Asn Arg 245 250

<210> 120

<21.1> 251.

<212> PRT <213> Homo sapiens

(ZI3) HOMO Bapier

 $<\!400>120$ Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115

- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135 140
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150 155 160 145
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 175 . 165
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200
- Glu Ser Gly Thr Val Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 230 225
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 121 <211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala.

- Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30
- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 45 3.5
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 141

70 75 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 8.5

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe His Tyr Tyr 100 105

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 115

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr . 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150 155 145

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr - 185 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 220 210 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 230 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 122

<211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 60 \hspace{1cm}$
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$90\$
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Pro Val Tyr $100 \\ 105 \\ 110$
- Tyr Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130\,$. $\,$ $\,$ $135\,$
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $$150\$
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 \$180\$
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 123 <211> 251

<212> PRT

<213> Homo sapiens

<400> 123 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala $1 \ \ \, 1 \ \,$ 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ \$40\$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 \$170 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg $245 \ \ \, 250$

<210> 124

<211> 251

<212> PRT <213> Homo sapiens

<400> 124 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5101515

Ser Val Lys Val Pro Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Fro Gly Gln Gly Leu Glu Trp Val . \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \\ 0 \\ 55$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$95\$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 , 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $_{\rm 165}$ $_{\rm 170}$ $_{\rm 170}$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $$200_{\odot}$$

- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 125 <211> 251 <212> PRT

<213> Homo sapiens

<400> 125 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Pro Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \ \ 25 \ \ 30$

- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $_{50}$ $_{60}$
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $_{65}$ $_{70}$ $_{70}$ $_{75}$
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Cys $85 \\ 90 \\ 95$
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105
- Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 4 120 125
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \ \ 135 \ \ \ 140$
- Thr Leu Thr Gln Cys Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 146

145 150 155 1

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 \$180\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 225 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 126

<211> 251

<212> PRT <213> Homo sapiens

 $<\!400\!>$ 126 Gln Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

10 . 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 120 115

- Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala His Arg Leu Leu Met Tyr 180 185
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Asp Ser 195 200
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220 210
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 230 225
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 127

<211> 251

<212> PRT

<213> Homo sapiens

<400> 127

- Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 5
- Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25
- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 35
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 60 50 55
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 148

75

80

70 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe His Tyr Tyr 105

Asp Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 125 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 220 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 230 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 250 245

<210> 128

<211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1.0

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 20

Gly Ile Ser Trp Val Arg Gln Ala Fro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95 \hspace{1cm}$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Týr Phe $100 \\ 105$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Gly Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$ \$170\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 \$185\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220 .

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Fro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 129 <211> 251

<211> 231 <212> PRT

- <213> Homo sapiens
- <400> 129 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala $\frac{1}{10}$
- Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$
- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55$
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \\ 70 \\ 75$
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \ \ 90 \ \ 95$
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val His Glu Phe Phe $100 \hspace{1cm} 100 \hspace{1cm} 105 \hspace{1cm}$
- Ser Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 $$125^{\circ}$$
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$ \$170\$
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 \$200\$
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 151

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 130

<211> 251 <212> PRT

<213> Homo sapiens

<400> 130

Gin Val Gin Leu Val Gln Ser Giy Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly I1e Ser Trp Val Arg Gln Ala Ser Gly Gln Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 70 75 . 80 $

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 0.01$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 160

· Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr \$180\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 220 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 131 <211> 251

<212> PRT <213> Homo sapiens

<400> 131

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 5

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 2.0

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 7.0 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 105 100

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 115

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Lys Thr 140 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 153

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Gly Gly Ser 195 $200\,$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 132

<211> 251

<212> PRT <213> Homo sapiens

 $<\!400\!>$ 132 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 51015

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Åla Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly Arg Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \\ 0 \\ 55$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.5cm} 90 \hspace{0.5cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 . 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \hspace{1cm} 170 \hspace{1cm} 170 \hspace{1cm} 175 \hspace{1cm}$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 \$180\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$ \$235\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 133

<211> 251

<212> PRT <213> Homo sapiens

<400> 133 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 .5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

155

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 100 \\ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $\,$ $\,$ 150 $\,$ $\,$ $\,$ $\,$ 155 $\,$

Ala Thr Leu Ser Cys Arg Ala Ser Arg Ser Val Thr Arg Gly Trp Val $165 \hspace{1cm} 170 \hspace{1cm} 170 \hspace{1cm} 175 \hspace{1cm}$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 134

<211> 251

<212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \ \ 25 \ \ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$45\$

Gly Trp Ile Ser Gly His Asp Gly Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $90 \hspace{1cm} 95 \hspace{1cm}$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 100 10

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 . 155 160

Ala Thr Leu Ser Cys Lys Ala Ser Gln Ser Val Thr Arg Glý Trp Val $165 \\ 165 \\ 170 \\ 170$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 135 <211> 251

<212> PRT

<213> Homo sapiens

<400> 135 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala $\stackrel{1}{1}$ $\stackrel{5}{1}$ 10 $\stackrel{15}{1}$

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$. 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \ \ 55 \ \ 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Pro Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 100 \\ 105$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly . 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \hspace{1cm} 170 \hspace{1cm} 170 \hspace{1cm} 175 \hspace{1cm}$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr 180 $$185\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 \$200\$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 158

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 136 <211> 251

<211> 251 <212> PRT

<213> Homo sapiens

<400> 136 Gin Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asp His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95 \hspace{1.5cm}$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 105$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \hspace{1.5cm} 135 \hspace{1.5cm} 140 \hspace{1.5cm}$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$ \$170\$ \$175\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$215\$

Asp the Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 137 <211> 251

<212> PRT <213> Homo sapiens

<400> 137 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala $\frac{1}{1}$ $\frac{5}{1}$ 10 $\frac{15}{1}$

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$95\$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 105$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Gly Ser 195 \$200\$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 138

<211> 251

<212> PRT

<213> Homo sapiens

<400> 138 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 $^{\circ}$ 110 $^{\circ}$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130\,$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150150150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \\ 170 \\ 175$

Ala Trp Tyr Gln Gln Lys Pro Ala Gln Ala Pro Arg Leu Leu Met Tyr 180 \$180\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asn Arg Phe Ser Asp Ser 195 $200\,$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215220

Asp Tyr Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 139

<211> 251

<212> PRT

<213> Homo sapiens

<400> 139

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala $1 \ \ \, 1$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
162

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 105 \\ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \\ 185 \\ 190$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Arg Arg

<210> 140

<211> 250

<212> PRT

<213> Homo sapiens

<400> 140

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Arg Pro Gly Ala $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 75

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Ala Leu Asp

Leu Trp Gly Gln Gly Thr Met Val Asn Val Ser Ser Gly Gly Gly Gly 120

Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr 135 140

Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala 150 155

Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val Ala 165

Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr Gly 185 180

Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Glu 195 200

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp 210 215

Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr Phe 225 230

Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 141 <211> 251

<212> PRT

<213> Homo sapiens

<400> 141

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \ \ 55 \ \ . \ \ 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 70 75 80 $

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gly Tyr Tyr $100 \\ 105 \\ 110$

Ser Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 . 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Ile Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 165

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 $^{\prime}$ 250

<210> 142

<211> 251

<212> PRT

<213> Homo sapiens

<400> 142

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ \$40\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 70 75 75$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 105 \\ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{1cm} 200 \hspace{1cm} 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Gly Leu Glu Pro Glu 210 \$215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 .

<210> 143

<211> 251

<212> PRT

<213> Homo sapiens

<400> 143

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala 1 $$ 10 $$ 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Lys Tyr Tyr 100 105 110

Thr Asp Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130\,$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 167

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \\ 170 \\ 175$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 . 185 . 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{1cm} 200 \hspace{1cm} 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $$ 215 $$ 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 144

<211> 251

<212> PRT

<213> Homo sapiens

<400> 144

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ \$40\$. \$45\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 70 75 80 $

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \,\,$ $\,\,$ $110 \,\,$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,\,$ $185 \,\,$ $190 \,\,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{1cm} 200 \hspace{1cm} 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 145 <211> 251

<211> 251 <212> PRT

<213> Homo sapiens

-400- 145

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ \$40\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \ \ 55 \ \ 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

169

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.5cm} 90 \hspace{0.5cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Met His Ala Tyr 100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \,$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Ser Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,\,$ $185 \,\,$ $190 \,\,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Gln Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 146

<211> 251

<212> PRT

<213> Homo sapiens ·

<400> 146

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Iie Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60 .

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 70 75 80 $

Ile G1u Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.25in} 90 \hspace{0.25in} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe His Tyr Leu $100 $ $105 $ $$ $$ $$

Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \,$ $135 \,$ $140 \,$.

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \\ 170 \\ 175$

Ala Trp Tyr Gin Gin Lys Pro Giy Gin Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$ $190 \,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe A1a Va1 Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 147

<211> 251

<212> PRT

<213> Homo sapiens

<400> 147

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 $$ 70 $$. $$ 75 $$ 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 105 \\ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 $$120\ ^{\circ}$$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150155155

Ala Thr Leu Pro Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$ $190 \,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$215\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

1/2

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 148 <211> 251

<212> PRT <213> Homo sapiens

<400> 148

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1.5cm} 55 \hspace{1.5cm} 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 7075$. 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Cys Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Glu Glu Arg 145 150

Ala Thr Leu Ser Cys Arg Thr Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Pro Arg Leu Leu Ile Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Asp Ser 200 Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 230 Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 <210> 149 <211> 251 <212> PRT <213> Homo sapiens <400> 149 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 5 10 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 20 Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 45 Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 70 Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Ala Phe Gln Tyr Phe 105 Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 . 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 174

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \hspace{1cm} 185 \hspace{1cm} 185 \hspace{1cm} 190 \hspace{1cm}$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$210\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 150

<211> 251

<212> PRT

<213> Homo sapiens

<400> 150
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1
5
10
15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \\ 90 \\ 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Glu Tyr Phe 100 105 110

175

Ser Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \,$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$ \$170\$ \$175\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$. $\,$ 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 . 230 . 235 . 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 151

<211> 251 <212> PRŤ

<213> Homo sapiens

<400> 151

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Cys Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60 \hspace{1cm}$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
176

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65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 0.05$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 152

<211> 251

<212> PRT

<213> Homo sapiens

<400> 152

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 75 Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Phe Tyr Tyr 105 110 Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 1.35 140 Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 1.45 150 Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165 Ala Tro Tvr Gln Gln Lvs Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 190 180 185 Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 205 200 Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 153 <211> 251

<211> 251 <212> PRT

<213> Homo sapiens

<400> 153
Gln Val Gln Leu Val Gln Pro Gly Val Glu Val Lys Lys Pro Gly Ala
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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Glm Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 154

<211> 251 <212> PRT

<213> Homo sapiens

<400> 154

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $35 \hspace{1cm} 40 \hspace{1cm} 45$

Gly Trp Ile Ser Gly Arg Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 105 \\ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 . 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $^{\circ}$. 150 $^{\circ}$ 155 $^{\circ}$ 160 $^{\circ}$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Ala Gln Ala Pro Arg Leu Leu Met Tyr $180 \hspace{1cm} 185 \hspace{1cm} 190 \hspace{1cm}$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asn Arg Phe Ser Gly Ser

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu IIe Lys Arg 245 250

<210> 155 <211> 251

<212> PRT

<213> Homo sapiens

<400> 155

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys His Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.25in} 95 \hspace{0.25in} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

181

145 150 . 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230225235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 156

<211> 251

<212> PRT

<213> Homo sapiens

<400> 156
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \,$ $\,$ $\,$ $110 \,$

Asp His Trp Val Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \hspace{1cm} 185 \hspace{1cm} 190 \hspace{1cm}$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Asp Ser $195 \hspace{1.5cm} 200 \hspace{1.5cm} 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Phe Gly Gln Gly Thr Arg Leu Glu Ile Arg Arg 245 250

<210> 157

<211> 251 <212> PRT

<213> Homo sapiens

<400> 157

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His . 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60 \hspace{1cm}$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $$ 150 $$ 155 $$ 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Asp Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 158

<211> 251

<212> PRT

<213> Homo sapiens

<400> 158

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 70

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 25 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 105

Asp His Trp Gly Arg Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly . 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150 145

Ala Thr Leu, Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 230 235 225

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 250 245

<210> 159

<211> 251

<212> PRT

<213> Homo sapiens

<400> 159

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $35 \ \ 40 \ \ 45$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60 \hspace{1cm}$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser.Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 $$120\ _{\odot}$$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$ 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu $_{210}$ $_{215}$ $_{220}$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 160

<211> 251

<212> PRT

<213> Homo sapiens

<400> 160

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 \cdot 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Ala Tyr Tyr 100 105 110

Pro Asp Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $\,$ 215 $\,$ 220 $\,$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 161 <211> 251

<212> PRT <213> Homo sapiens

<400> 161

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Ile Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 70 75 80 $

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 . 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160
Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 162

<211> 251 <212> PRT

<213> Homo sapiens

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 0.05$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130\,$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $$ 150 $$ 155 $$. 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 \cdot \cdot 170 \cdot 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Met Tyr $180 \,$ $185 \, .$ $190 \,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Asp Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 163 <211> 251

<212> PRT

<213> Homo sapiens

<400> 163

Gln Val Gln Leu Val Gln Ser Gly Val Glu Glu Lys Lys Pro Gly Ala 1 510

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 190

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 0.05$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Gly Val Thr Arg Gly Trp Val $165 \\ 170 \\ 175$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$ $190 \,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 164

<211> 244

<212> PRT

<213> Homo sapiens

<400> 164

Gln Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asp Asp Tyr \$20\$

Ala	Met	His 35	Trp	Val	Arg	Gln	Ala 40	Pro	Gly	Lys	Gly	Leu 45	Asp	Trp	Val
Ser	Ala 50	Ile	Thr	Trp	Asn	Ser 55	Gly	His	Ile	Asp	Tyr 60	Ala	Asp	Ser	Val
Glu 65	Gly	Arg	Phe	Ala	Val 70	Ser	Arg	Asp	Asn	Ala 75	Lys	Asn	Ala	Leu	Tyr 80
Leu	Gln	Met	Asn	Ser 85	Leu	Arg	Prò	Glu	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	Cys
Thr	Lys	Ala	Ser 100	Tyr	Leu	Ser	Thr	Ser 105	Ser	Ser	Leu	Asp	Asn 110	Trp	Gly
Gln	Gly	Thr 115	Leu	Val	Thr	Val	Ser 120	Ser	Gly	Gly	Gly	Gly 125	Ser	Gly	Gly
Gly	Gly 130	Ser	Gly	Gly	Gly	Gly 135	Ser	Asp	Ile	Gln	Met 140	Thr	Gln	Ser	Pro
Ser 145	Ser	Leu	Ser	Ala	Ser 150	Ile	Gly	Asp	Arg	Val 155	Thr	Ile	Thr	Cys	Arg 160
Ala	Ser	Gln	Gly	Ile 165	Arg	Asn	Tyr	Leu	Ala 170	Trp	Tyr	Gln	Gln	Lys 175	Pro
Gly	Lys	Ala	Pro 180	Lys	Leu	Leu	Ile	Tyr 185	Ala	Ala	Ser	Thr	Leu 190	Gln	Ser

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr

Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Val Ala Thr Tyr Tyr Cys

Gln Lys Tyr Asn Ser Ala Pro Tyr Ala Phe Gly Gln Gly Thr Lys Val 225 230 $$ 235 235

Glu Ile Glu Arg

<210> 165 <211> 251 <212> PRT

<213> Homo sapiens

<400> 165 Gln Val Gln Leu Val Gln Ser Gly Val Lys Val Lys Lys Pro Gly Ala 1 5 10 15

 $\,^{\scriptscriptstyle L}$ Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 707075$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Pro Val Tyr $100 \ \ \, 105 \ \ \, 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 $$ 170 $$ 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 166 <211> 251 <212> PRT

<213> Homo sapiens

<400> 166
Gin Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1
5
10
15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1cm} 70 \hspace{1cm} 75 \hspace{1cm} 75 \hspace{1cm} 80 \hspace{1cm}$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \hspace{1cm} 105 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$

Ala His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \,$ $135 \,$ $140 \,$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 $$185\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{1cm} 200 \hspace{1cm} 205 \hspace{1cm}$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 . $250\,$

<210> 167 <211> 251

<212> PRT

<213> Homo sapiens

 $<\!400>$ 167 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60 \hspace{1cm}$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 70757080$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ $90\,$, 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \,$ $\,$ $\,$ $110 \,$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

193

145 150 155 160

Ala Thr Leu Ser Cys Gly Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 168

<211> 251

<212> PRT

<213> Homo sapiens

<400> 168

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala $_{\rm 1}$ $_{\rm 5}$ $_{\rm 10}$ $_{\rm .}$ $_{\rm 15}$

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $^\circ$ 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100\,$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 1.35 Thr Leu Thr Gln Ser Pro Asn Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 145 150 Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 1.70 165 Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 180 Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200 195 Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 220 215 Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 225 230 Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 <210> 169 <211> 251 <212> PRT <213> Homo sapiens Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 . 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $$. 150 $$ 155 $$ 150 $$ 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Leu Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg

<210> 170

<211> 251

<212> PRT

<213> Homo sapiens

<400> 170

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30 \hspace{1.5cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Phe Tyr Tyr $100 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$
- Pro Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150155
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 171 <211> 251

<211> 231 <212> PRT

199

<213> Homo sapiens

<400> 171
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$

Asp His Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr \$180\$ \$185\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu $210 \,$ $\,$ 215 $\,$ 220 $\,$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 172

<211> 251 <212> PRT

<213> Homo sapiens

<400> 172

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \\ 70 \\ 75 \\ 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95 \hspace{1.5cm}$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Glu Val Tyr $100 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$

His Pro Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg
145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 $$ 170 $$ 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 \$200\$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $\,$ 215 $\,$ 220 $\,$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 173 <211> 251

<212> PRT

<213> Homo sapiens

<400> 173

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $35 \ \ 40 \ \ 45$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \\ 90 \\ 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Ala Pro Leu $100 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$

Val Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

202

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \\ 170 \\ 175$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr. Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{1cm} 200 \hspace{1cm} 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 174

<211> 251

<212> PRT

<213> Homo sapiens

<400> 174

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $$ 85 $$ 90 $$ 95

Ala Phe Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 . 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg \$245\$

<210> 175 <211> 251

<212> PRT ,

<213> Homo sapiens

<400> 175

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Glm Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Gly Tyr 204

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe
100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $$ 150 $$ 155 $$ 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$ \$170\$ \$170\$ \$175\$.

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala His Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 176

<211> 251

<212> PRT <213> Homo sapiens

-400> 176

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly	Ile	Ser 35	Trp	Val	Arg	Gln	Ala 40	Pro	Gly	Gln	Gly	Leu 45	Glu	Trp	Val
Gly	Trp 50	Ile	Ser	Gly	His	Asp 55	Asp	Ser	Thr	Lys	Tyr 60	Ala	Gln	Lys	Phe
Gln 65	Gly	Arg	Val	Thr	Met 70	Thr	Ala	Asp	Thr	Ser 75	Thr	Ser	Thr	Ala	Tyr 80
Ile	Glu	Leu	Arg	Ser 85	Leu	Lys	Ser	Asp	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	Cys
Ala	Arg	Pro	Phe 100	Tyr	Asp	Thr	Leu	Thr 105	Ser	Tyr	Val	Ile	Leu 110	Tyr	Tyr
Leu	His	Trp 115	Gly	Gln	Gly	Thr	Met 120	Val	Thr	Val	Ser	Ser 125	Gly	Gly	Gly
Gly	Ser 130	Gly	Gly	Gly	Gly	Ser 135	Gly	Gly	Gly	Gly	Ser 140	Ala	Leu	Glu	Thr
Thr 145	Leu	Thr	Gln	Ser	Pro 150	Asp	Thr	Leu	Ser	Leu 155	Ser	Pro	Gly	Glu	Arg 160
Ala	Thr	Leu	Ser	Cys 165	Arg	Ala	Ser	Gln	Ser 170	Va1	Thr	Arg	Gly	Trp 175	Val
Ala	Trp	Tyr	Gln 180	Gln	Lys	Pro	Gly	Gln 185	Ala	Pro	Arg	Leu	Leu 190	Met	Tyr
Gly	Thr	Ser 195	Arg	Arg	Ala	Thr	Gly 200	Val	Pro	Asp	Arg	Phe 205	Ser	Gly	Ser
G1u	Ser 210	Gly	Thr	Asp	Phe	Thr 215	Leu	Thr	Ile	Ser	Arg 220	Leu	Glu	Pro	Glu
Asp 225	Phe	Ala	Val	Tyr	Tyr 230	Cys	Gln	Gln	Tyr	Ala 235	Thr	Ser	Pro	Gln	Thr 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 177 <211> 251 <212> PRT

<213> Homo sapiens

<400> 177

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Glu Phe Leu $100 \,$ $\,$ $\,$ $110 \,$

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr . 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 207

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 178 <211> 251

<212> PRT <213> Homo sapiens

<400> 178

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60.

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Arg Pro Phe Tyr 100 105 110

Ala His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 \$200\$

- Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $$ 215 $$ 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg

<210> 179

<211> 251 <212> PRT

<213> Homo sapiens

<400> 179

Gln Vai Gin Leu Vai Gln Ser Gly Val Glu Vai Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ \$40\$
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1.5cm} 55 \hspace{1.5cm} 60$
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 707575$
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 105 \\ 110$
- Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

209

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Gly Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $$\cdot$$ 180 \$185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 $^{\circ}$ 230 $^{\circ}$ 235 $^{\circ}$ 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg

<210> 180

<211> 251

<212> PRT

<213> Homo sapiens

<400> 180

Gln Ala Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala $\stackrel{\circ}{1}$ 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60 \hspace{1cm}$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $^{\circ}85$ 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Phe Tyr 100 105 110

Arg Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 205 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 , 230

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 181 <211> 251

<212> PRT

<213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 60 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 211

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \ 105 \ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Val Leu Glu Thr 130 \$135\$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \\ 170 \\ 175$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 182

<211> 251

<212> PRT

<213> Homo sapiens

<400> 182

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 51015

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly	Ile	Ser 35	Trp	Val	Arg	Gln	Ala 40	Pro	Gly	Gln	Gly	Leu 45	Glu	Trp	Va1
Gly	Trp 50	Ile	Ser	Gly	His	Asp 55	Asp	Ser	Thr	Lys	Tyr 60	Ala	Gln	Lys	Phe
Gln 65	Gly	Arg	Val	Thr	Met 70	Thr	Ala	Asp	Thr	Ser 75	Thr	Ser	Thr	Ala	Tyr 80
Ile	Glu	Leu	Arg	Ser 85	Leu	Lys	Ser	Asp	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	Cys
Ala	Arg	Pro	Phe 100	Tyr	Asp	Thr	Leu	Thr 105	Ser	Tyr	Val	Ile	Gln 110	Tyr	Phe
Asp	His	Trp 115	Gly	Gln	Gly	Thr	Met 120	Val	Thr	Val	Ser	Ser 125	Gly	Gly	Gly
Gly	Ser 130	Gly	Gly	Gly	Gly	Ser 135	Gly	Gly	Gly	Gly	Ser 140	Ala	Leu	Glu	Thr
Thr 145	Leu	Thr	Gln	Ser	Pro 150	Asp	Thr	Leu	Ser	Leu 155	Ser	Pro	Gly	Glu	Arg 160
Ala	Thr	Leu	Ser	Сув 165	Arg	Ala	Ser	Gln	Ser 170	Val	Thr	Arg	Gly	Trp 175	Va1
Ala	Trp	Tyr	Gln 180	Gln	Lys	Pro	Gly	Gln 185	Ala	Pro	Arg	Leu	Leu 190	Met	Tyr
Gly	Thr	Ser 195	Arg	Arg	Ala	Thr	Gly 200	Val	Pro	Asp	Arg	Phe 205	Ser	Gly	Ser
Glu	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Arg	Leu	Glu	Pro	Glu

210 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 183

<211> 251

<212> PRT

<213> Homo sapiens

<400> 183

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Gly Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val His Glu Phe Phe $100 \\ 105 \\ 110$

Ser Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 184 <211> 251 <212> PRT <213> Homo sapiens

<400> 184
Glm Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1
5
10
15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Arg Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \\ 70 \\ 75 \\ 80$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Met Gln Phe Phe $100 \,$ $\,$ $\,$ $105 \,$

Pro Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 \$200\$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $$ 215 $$ 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 185 <211> 251 <212> PRT

<213> Homo sapiens

<400> 185

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50\,$. $\,$ $\,$ $\,$ 55 $\,$ 60 $\,$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Ser Phe Tyr
100 105 110

Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 \$180\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 186

<211> 251

<212> PRT <213> Homo sapiens

<400> 186

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Tyr Tyr Tyr 100 \$105\$

Ala Phe Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 . 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Leu Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Asp Ser $195 \hspace{1cm} 200 \hspace{1cm} 205$

Asp Cys Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 187 <211> 251

<211> 251 <212> PRT

<213> Homo sapiens

<400> 187

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 $$ 5 $$ 10 $$ 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \ \ 25 \ \ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

75

80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

70

65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cy 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \ \ 105 \ \ \ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125 .

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser His Arg Leu Leu Met Tyr 180 185 190

Gly Thr Phe Arg Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Asp Ser 195 200 205

Glu Ser Gly Thr Asp Phe Ser Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Ser Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 188

<211> 251 <212> PRT

<213> Homo sapiens

<400× 188

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly	Ile	Ser 35	Trp	Val	Arg	Gln	Ala 40	Pro	Gly	Gln	Gly	Leu 45	Glu	Trp	Val		
Gly	Trp 50	Ile	Ser	Gly	His	Asp 55	Asp	Ser	Thr	Lys	Tyr 60	Ala	Gln	Lys	Phe		
Gln 65	Gly	Arg	Val	Thr	Met 70	Thr	Ala	Asp	Thr	Ser 75	Thr	Ser	Thr	Ala	Tyr 80		
Ile	Glu	Leu	Arg	Ser 85	Leu	Lys	Ser	qaA	Asp 90	Thr	Asp	Val	Tyr	Tyr 95	Cys		
Ala	Arg	Pro	Phe 100	Tyr	Asp	Thr	Leu	Thr 105	Ser	Tyr	Val	Phe	Gln 110	Tyr	Phe	,	
Asp	His	Trp 115	Gly	Gln	Gly	Thr	Met 120	Val	Thr	Ϋal	Ser	Ser 125	Gly	Gly	Gly		
Gly	Ser 130	Gly	Gly	Gly	Gly	Ser 135	Gly	Gly	Gly	Gly	Ser 140	Ala	Leu	Glu	Thr		
Thr 145	Leu	Thr	Gln	Ser	Pro 150	Asp	Thr	Leu	Ser	Leu 155	Ser	Pro	Gly	Glu	Arg 160		
Ala	Thr	Leu	Ser	Cys 165	Arg	Ala	Ser	Gln	Ser 170	Val	Thr	Arg	Gly	Trp 175	Val		
Ala	Trp	Tyr	Gln 180	Gln	Lys	Pro	Gly	Gln 185	Ala	Pro	Arg	Leu	Leu 190	Met	Tyr		
Gly	Thr	Ser 195	Arg	Arg	Ala	Thr	Gly 200	Val	Pro	Asp	Arg	Phe 205	Ser	Gly	Ser		
Glu	Ser 210	Gly	Thr	Asp	Phe	Thr 215	Leu	Thr	Ile	Ser	Arg 220	Leu	Glu	Pro	Glu		
Asp 225		Ala	Val	Tyr	Tyr 230	Cys	Gln	Gln	Tyr	Ala 235	Thr	Ser	Pro	Arg	Thr 240		

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 . 250

<210> 189 <211> 251 <212> PRT

<213> Homo sapiens '

<400> 189 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Lys Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 $^{\circ}$. 150 $^{\circ}$ 155 $^{\circ}$ 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 221

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 190

<211> 251

<212> PRT

<213> Homo sapiens

<400> 190

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Phe Tyr $100 \,$ $105 \,$ $110 \,$

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 . 120 . 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $\,$ 215 $\,$ 220 $\,$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 191

<211> 251 <212> PRT

<213> Homo sapiens

<400> 191

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 $$ 10 $$ 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Gln Tyr Tyr 100 . 105 . 110

Val Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly . 115 120 125

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

44:

155

160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Va 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 192

145

<211> 251

<212> PRT

<213> Homo sapiens

<400> 192

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135 Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150 155 145 Ala Thr Leu Ser Cvs Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165 Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 190 Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 205 Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Leu Glu 215 Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Ala 230 225 Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 <210> 193 <211> 251 <212> PRT <213> Homo sapiens Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1.0

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 4.0

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

225

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe G1n Tyr Phe $100 \ 105 \ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \\ 135 \\ 140 \\$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Val Tyr $180 \,$ $185 \,$ $190 \,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 194

<211> 251

<212> PRT

<213> Homo sapiens

<400> 194

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly	Ile	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp	Va.
		35					40					45			

- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60 \hspace{1cm}$
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Val Tyr $_{65}$ $$ 70 $$ 75 $$ 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 0.05 \\ 105 \\ 110$
- Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$
- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$ $190 \,$
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$ 205
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $\,$ 220 $\,$
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 240
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

227

<210> 195

<211> 251

<212> PRT

<213> Homo sapiens

<400> 195
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 9090$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $\stackrel{\cdot}{100}$ 100 105 110

Asp Tyr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 196 <211> 251

<211> 251 <212> PRT

<213> Homo sapiens

<400> 196

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 $$ 10 $$ 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $35 \ \ 40 \ \ 45$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $\,\,\dot{}$ 50 $\,\,$ 55 $\,\,$ 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Pro Val Trp \$100\$

Val Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Asp Gln Ala Ser Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 Asp Ser Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 230 235 Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 <210> 197 <211> 251 <212> PRT <213> Homo sapiens <400> 197 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 10 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly _ 115 Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 230

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Thr Thr Gly Val Pro Gly Arg Phe Ser Gly Ser $195 \ 200 \ \ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235 240

<210> 198

<211> 251

<212> PRT

<213> Homo sapiens

<400> 198 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 707575$

Ile Glu Leu Arg Gly Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 . 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Pro Ser Gly Gly 115 Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135 Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 150 Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165 Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 220 215 Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 225 230 Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 <210> 199 <211> 251 <212> PRT <213> Homo sapiens Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Tyr Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 60 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
232

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \,$ $105 \,$ $110 \,$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr $130 \\ \hspace{1.5cm} 135 \\ \hspace{1.5cm} 140$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 \$170\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr \$180\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{1cm} 200 \hspace{1cm} 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$ 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 200

<211> 251

<212> PRT

<213> Homo sapiens

<400> 200

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly	Ile	Ser 35	Trp	Val	Arg	Gln	Ala 40	Pro	Gly	Gln	Gly	Leu 45	Glu	Trp	Val
Gly	Trp 50	Val	Ser	Gly	His	Asp 55	Asp	Ser	Thr	Lys	Tyr 60	Ala	Gln	Lys	Phe
Gln 65	Gly	Arg	Val	Thr	Met 70	Thr	Ala	Asp	Thr	Ser 75	Thr	Ser	Thr	Ala	Tyr 80
Ile	Glu	Leu	Arg	Ser 85	Leu	Lys	Ser	Asp	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	Сув
Ala	Arg	Pro	Phe 100	Tyr	Asp	Thr	Leu	Thr 105	Ser	Tyr	Val	Phe	Gln 110	Tyr	Phe
Asp	His	Trp 115	Gly	Gln	Gly	Thr	Met 120	Val	Thr	Val	Ser	Ser 125	Gly	Ġly	Gly
Gly	Ser 130	Gly	Gly	Gly	Gly	Ser 135	Gly	Gly	Gly	Gly	Ser 140	Ála	Leu	Glu	Thr
Thr 145	Leu	Thr	Gln	Ser	Pro 150	Asp	Thr	Leu	Ser	Leu 155	Ser	Pro	Gly	Glu	Arg 160
Ala	Thr	Leu	Ser	Cys 165	Arg	Ala	Ser	Gln	Ser 170	Val	Thr	Arg	Gly	Trp 175	Val
Ala	Trp	Tyr	Gln 180	Gln	Lys	Pro	Gly	Gln 185	Ala	Pro	Arg	Leu	Leu 190	Met	Tyr
G1y	Thr	Ser 195	Arg	Arg	Ala	Thr	Gly 200	Val	Pro	Asp	Arg	Phe 205	Ser	Gly	Ser
a1	a		m1.		D1	ml.		ml	-1.			-	a 1		0 1

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 240 225 230

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 201 <211> 251

<212> PRT

<213> Homo sapiens

<400> 201

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $$, 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Glu Tyr Tyr $100 \ \ 100 \ \ \ 105 \ \ \ \ 110$

Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Thr Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200. 205

Glu Ser Gly Thr Asp Phe Thr Leu Ser Ile Ser Arg Leu Glu Pro Glu 210 215 , 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Val Thr Ser Pro Arg Thr

235

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 202 <211> 251 <212> PRT

<213> Homo sapiens

<400> 202

Gln Val Gln Leu Val Gln Ser Gly Val Glu Ala Lys Lys Pro Gly Ala 1 $$ 5 $$ 10 $$ 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 . 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \,$ $\,$ $105 \,$ $\,$ $\,$ $110 \,$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Pro Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 230 235 Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 <210> 203 <211> 251 <212> PRT <213> Homo sapiens <400> 203 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1.0 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 2.0 2.5 Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 3.5 40 Gly Trp Ile Ser Gly His Asp Asp Ser Thr Glu Tyr Ala Gln Lys Phe 50 55 Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Tyr Leu 105 Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

135

130

145 150 155 160

Ala Ala Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 204

<211> 251

<212> PRT <213> Homo sapiens

<400> 204

Gln Val Gln Leu Val Gln Ser Gly Val Gly Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$ \$170\$ \$175\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 205

<211> 251

<212> PRT

<213> Homo sapiens

<400> 205

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 1

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
239

435

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \ \ 105 \ \ \ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 \$135\$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Gly 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 206

<211> 251

<212> PRT

<213> Homo sapiens

<400> 206

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 $$ 10 $$ 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His \$20\$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Pro Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe His Phe Tyr $100 \,$ $105 \,$ $110 \,$

Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$210\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg $\cdot \cdot \cdot \cdot 245$

<210> 207

<211> 251

<212> PRT

<213> Homo sapiens

<400> 207 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $35 \ \ 40 \ \ 45$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 60$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \hspace{0.25cm} 100 \hspace{0.25cm} 105 \hspace{0.25cm} 110 \hspace{0.25cm}$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \\ 170 \\ 175$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr \$180\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 208

<211> 251 <212> PRT

<213> Homo sapiens

<400> 208

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 51010151515101

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Glu Ala Phe 100 105 110

Ser Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$ 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Val Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 209 <211> 251

<212> PRT <213> Homo sapiens

<400> 209

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 $$ 10 $$ 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \ \ 90 \ \ 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gly Phe Tyr 100 \$100\$

Pro Phe Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{1cm} 200 \hspace{1cm} 205$

Glu Ser Gly Thr Gly Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $\,$ 215 $\,$ 220 $\,$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 210

<211> 251

<212> PRT <213> Homo sapiens

<400> 210

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 - 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly 115 Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135 Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 150 Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Thr Arg Gly Trp Val 165 Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Ser Arg Leu Leu Met Tyr 1.80 185 Gly Ser Ser Arg Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220 210 Asp Ser Ala Val Tyr Cys Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 240 230 Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg <210> 211 <211> 251 <212> PRT <213> Homo sapiens <400> 211 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 246

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Ile Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \,$ $105 \,$ $110 \,$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Pro Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \ \ \, 140$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \hspace{0.5cm} 185 \hspace{0.5cm} 190 \hspace{0.5cm}$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 212

<211> 251

<212> PRT

<213> Homo sapiens

<400> 212

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn-His $20 \\ 25 \\ 30$

Gly	Ile	Ser 35	Trp	Val	Arg	Gln	A1a 40	Pro	Gly	Gln	Gly	Leu 45	Glu	Trp	Val
Gly	Trp 50	Ile	Ser	Gly	His	Asp 55	Asp	Ser	Thr	Lys	Tyr 60	Ala	Gln	Lys	Pḥe
Gln 65	Gly	Arg	Val	Thr	Met 70	Thr	Ala	Asp	Thr	Ser 75	Thr	Ser	Thr	Ala	Tyr 80
Ile	Glu	Leu	Arg	Ser 85	Leu	Lys	Ser	Asp	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	Сув
Ala	Arg	Pro	Phe 100	Tyr	Asp	Thr	Leu	Thr 105	Ser	Tyr	Val	Leu	Trp 110	Tyr,	Tyr
Gln	Asp	Trp 115	Gly	Gln	Gly	Thr	Met 120	Val	Thr	Val	Ser	Ser 125	Gly	Gly	Gly
Gly	Ser 130	Gly	Gly	Gly	Gly	Ser 135	Gly	Gly	Gly	Gly	Ser 140	Ala	Leu	Glu	Thr
Thr 145	Leu	Thr	Gln	Ser	Pro 150	Asp	Thr	Leu	Ser	Leu 155	Ser	Pro	Gly	Glu	Arg 160
Ala	Thr	Leu	Ser	Cys 165	Arg	Ala	Ser	Gln	Ser 170	Val	Thr	Arg	Gly	Trp 175	Val
Ala	Trp	Tyr	Gln 180	Gln	ГЛЗ	Pro	Gly	Gln 185	Ala	Pro	Arg	Leu	Leu 190	Met	Tyr
Gly	Thr	Ser 195	Arg	Arg	Ala	Thr	Gly 200	Val	Pro	Asp	Arg	Phe 205	Ser	Gly	Ser
Glu	Ser 210	Gly	Thr	Asp	Phe	Thr 215	Leu	Thr	Ile	Ser	Arg 220	Leu	Glu	Pro	Glu
Asp 225	Phe	Ala	Val	Tyr	Tyr 230	Cys	Gln	Gln	Tyr		Thr	Ser	Pro	Arg	Thr 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 213 <211> 251

<212> PRT

<213> Homo sapiens

<400> 213

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \ 25 \ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 70 75 75$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Pro Phe Tyr $100 \\ 0.05$

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 $$120\$

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 \$180\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$ 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 214 <211> 251 <212> PRT <213> Homo sapiens

<400> 214 Ghn Val Ghn Leu Val Ghn Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30 \\ .$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50\,$. $\,$ 55 $\,$ 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100~ 105~ 110~

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Ala Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Tro Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $$\rm 220$$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg $24\dot{5}$ 250

<210> 215

<211> 251 <212> PRT

<213> Homo sapiens

<400> 215

Gln Val Gln Leu Val Gln Ser Glu Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1.5cm} 55 \hspace{1.5cm} 60 \hspace{1.5cm}$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 7075

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 $$100\,$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $$. 215 $$ 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

· <210> 216

<211> 251

<212> PRT

<213> Homo sapiens

<400> 216

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala 1 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30 \hspace{1.5cm}$

Ser Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 $$105\$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120

- Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150 155
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250
- <210> 217 <211> 251
- <212> PRT <400> 217
- <213> Homo sapiens
- Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1. 5
- Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25
- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35
- Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 253

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130\,$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$ $190 \,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg

<210> 218

<211> 251

<212> PRT

<213> Homo sapiens

<400> 218

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 75 Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Glu Phe Phe 105 110 Pro Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Glv Glv Glv 120 Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135 140 Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 219 <211> 251

<212> PRT

<213> Homo sapiens

<400> 219
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60 \hspace{1cm}$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 70 75 $

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Glu Tyr Leu $100 \,$ $\,$ $105 \,$ $\,$ $\,$ $110 \,$ $\,$ $^{\circ}$

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly . 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150150150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{1cm} 200 \hspace{1cm} 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glụ Pro Glu 210 225 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 220 <211> 251

<212> PRT

<213> Homo sapiens

<400> 220

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Tyr Tyr $100 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$

Ser Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$ \$170\$ \$175\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$. $205\,$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $\,$ 215 $\,$ 220 $\,$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 221 <211> 251

<212> PRT

<213> Homo sapiens

-400- 221

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Arg Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Phe Tyr Tyr 100 105 110

Thr Ala Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \\ 135 \\ 140$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

155 160 150 145

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 230

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg

<210> 222

<211> 251

<212> PRT <213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 70 65

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 85

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Tyr Leu 105 110 100

Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140 Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 150 . 155 Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200 Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 223 <211> 251

<212> PRT <213> Homo sapiens

<400> 223
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 . 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

260

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 . 135 140

Thr Leu Thr Gln Ser Pro Asp Ala Leu Ser Leu Ser Pro Gly Glu Arg 145 150150150150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230230235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 224

<211> 251

<212> PRT <213> Homo sapiens

<400> 224

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn Tyr 2025

Gly	Ile	Ser 35	Trp	Val	Arg	Gln	Ala 40	Pro	Gly	Gln	Gly	Leu 45	Glu	Trp	Va1
Gly	Trp 50	Ile	Ser	Gly	His	Asp 55	Asp	Ser	Thr	Lys	Tyr 60	Ala	Gln	Lys	Phe
Gln 65	Gly	Arg	Val	Thr	Met 70	Thr	Ala	Asp	Thr	Ser 75	Thr	Ser	Thr	Ala	Tyr 80
Ile	Glu	Leu	Arg	Ser 85	Leu	Lys	Ser	Asp	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	
Ala	Arg	Pro	Phe 100	Tyr	Asp	Thr	Leu	Thr 105	Ser	Tyr	Val	Phe	Gln 110	Tyr	Phe
Asp	His	Trp 115	Gly	Gln	Gly	Thr	Met 120	Val	Thr	Val	Ser	Ser 125	Gly	Gly	Gly
Gly	Ser 130	Gly	Gly	Gly	Gly	Ser 135	Gly	Gly	Gly	Gly	Ser 140	Ala	Leu	Glu	Thr
Thr 145	Leu	Thr	Gln	Ser	Pro 150	Asp	Thr	Leu	Ser	Leu 155	Ser	Pro	Gly	Glu	Arg 160
Ala	Thr	Leu	Ser	Сув 165	Arg	Ala	Ser	Gln	Ser 170	Val	Thr	Arg	Gly	Trp 175	Val
Ala	Trp	Tyr	Gln 180	Gln	Lys	Pro	Gly	Gln 185	Ala	Pro	Arg	Leu	Leu 190	Met	Tyr
Gly	Thr	Ser 195	Arg	Arg	Ala	Thr	Gly 200	Val	Pro	Asp	Arg	Phe 205	Ser	Gly	Ser
Glu	Ser 210	Gly	Thr	Asp	Phe	Thr 215	Leu	Thr	Ile	Ser	Arg 220	Leu	Glu	Pro	Glu
Asp 225	Phe	Ala	Val	Tyr	Tyr 230	Сув	Gln	Gln	Tyr	Ala 235	Thr	Ser	Pro	Arg	Thr 240
Phe	Gly	Gln	Gly	Thr 245	Arg	Leu	Glu	Ile	Lys 250	Arg					

<210> 225 <211> 251

<212> PRT

<213> Homo sapiens '

<400> 225

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Met His Tyr Tyr $100 \\ 105 \\ 110$

Pro Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \cdot $$ 150 $$ 155 $$ 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 226 <211> 251 <212> PRT

<213> Homo sapiens

<400> 226
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Leu Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$ 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 227 <211> 251

<212> PRT

<213> Homo sapiens

<400> 227

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 510

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1.5cm} 25 \hspace{1.5cm} . \hspace{1.5cm} 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Gln Tyr Phe 100 . 105 110

Arg Tyr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{1cm} 200 \hspace{1cm} 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230230235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 228

<211> 251

<212> PRT

<213> Homo sapiens

<400> 228

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $35 \ \ 40 \ \ 45$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Gln Val Phe $100 105 110 $

266

Asp Thr Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val . 165 \$170\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 229

<211> 251

<212> PRT <213> Homo sapiens

. <400> 229

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 267

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 100$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150155

Ala Thr Leu Ser Cys Arg Val Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 . 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg

<210> 230

<211> 251

<212> PRT

<213> Homo sapiens

<400> 230

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 75 70

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 90 .

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe

Asp His Trp Gly Gln Gly Ala Met Val Thr Val Ser Ser Gly Gly Gly

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 165

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185 180

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220 210

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 231 <211> 251

<212> PRT

<213> Homo sapiens

<400> 231 Ghn Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $_{65}$ $_{70}$ $_{70}$ $_{75}$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Asp Tyr Tyr 100 105 110

Ser Ser Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 232 <211> 251

<212> PRT

<213> Homo sapiens

<400> 232

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Fro Gly Ala $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ala Arg Pro Phe Tyr Asp Ala Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \ \ 105 \ \ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val
165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \hspace{1cm} 185 \hspace{1cm} 190$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 230 235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 233 <211> 251

<212> PRT

<213> Homo sapiens

<400> 233

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Arg Ser Val Thr Arg Gly Trp Val $165 \\ 170 \\ 175$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 234

<211> 251

<212> PRT

<213> Homo sapiens

<400> 234

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Pro Phe Tyr 100 \$100\$

Pro His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$ \$170\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$ $190 \,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 \$200\$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 235 <211> 251

<212> PRT

<213> Homo sapiens

<400> 235

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 $$ 5 $$ 10 $$ 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $35 \ \ 40 \ \ . \ \ 45$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

2/4

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Gly Phe Tyr 100 105 110

Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150150155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 236

<211> 251

<212> PRT

<213> Homo sapiens

<400> 236

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 . 15

275

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $35 \ \ 40 \ \ 45$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 $$105\$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \\ 170 \\ 175$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 \$180\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 237

<211> 251

<212> PRT

<213> Homo sapiens

<400> 237 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ \$40\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Met Asp Phe Tyr 100 105 110

Ser Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 $^{\circ}$ 120 $^{\circ}$ 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \ \ 135 \ \ \ 140$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 238

<211> 251

<212> PRT <213> Homo sapiens

<400> 238

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys . 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \,$ $\,$ $\,$ $110 \,$

Asp His Trp Gly Gln Gly Thr Met Val Ile Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 239 <211> 251

<212> PRT

<213> Homo sapiens

<400> 239

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 $^{\circ}$ 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$85\$ 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \,\,$ $\,\,$ $110 \,\,$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \\ \rm 135 \\ \rm 140 \\ \rm 140$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

275

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 $$185\$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{1cm} 200 \hspace{1cm} 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 240

<211> 251

<212> PRT

<213> Homo sapiens

<400> 240

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140 Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Glv Glu Arg 145 150 155 Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170 Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser . 200 Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Pro Thr 235 Phe Glv Gln Glv Thr Arg Leu Glu Ile Lvs Arg 245 <210> 241 <211> 251 <212> PRT <213> Homo sapiens Gln Val Gln Leu Val Gln Ala Ala Val Glu Val Lys Lys Pro Gly Ala 5 10 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 20 Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45 Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr
281

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 105 \\ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$ $190 \,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 242

<211> 251

<212> PRT

<213> Homo sapiens

<400> 242

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly	Ile	Ser 35	Trp	Val	Arg	Gln	Ala 40	Pro	Gly	Gln	Gly	Leu 45	Glu	Trp	Val
Gly	Trp 50	Ile	Ser	Gly	His	Asp 55	Asp	Ser	Thr	Lys	Tyr 60	Ala	Gln	Lys	Phe
Gln 65	Gly	Arg	Val	Thr	Met 70	Thr	Ala	Asp	Thr	Ser 75	Ala	Ser	Thr	Ala	Tyr 80
Ile	Glu	Leu	Arg	Ser 85	Leu	Lys	Ser	Asp	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	Cys
Ala	Arg	Pro	Phe 100	Tyr	Asp	Thr	Leu	Thr 105	Ser	Tyr	Val	Phe	Gln 110	Tyr	Phe
Asp	His	Trp 115	Gly	Gln	Gly	Thr	Met 120	Val	Thr	Val	Ser	Ser 125	Gly	Gly	Gly
Gly	Ser 130	Gly	Gly	Gly	Gly	Ser 135	Gly	Gly	Gly	Gly	Ser 140	Ala	Leu	Glu	Thr
Thr 145	Leu	Thr	Gln	Ser	Pro	Asp	Thr	Leu	Ser	Leu 155	Ser	Pro	Gly	Glu	Arg 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 \$230\$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 243

<211> 251

<212> PRT

<213> Homo sapiens

<400> 243

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30 \hspace{1.5cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Gly Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 135$

Thr Leu Thr Gln Ser Ser Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 150 155

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 244

<211> 251 <212> PRT

<213> Homo sapiens

<400> 244

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala $1 \ \ \, 5 \ \ \, 10 \ \ \, 15$

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Pro Tyr Leu 100 105 110

Thr His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{0.25in} 200 \hspace{0.25in} 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$215\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230235235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 245 <211> 251

<212> PRT

<213> Homo sapiens

<400> 24

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5101015

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Asn Gly Gly Gly 115 \$120\$

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 - 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200\,\cdot\,\,205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 246

<211> 251

<212> PRT

<213> Homo sapiens

<400> 246
Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala
1
1
5
10
15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ \$40\$

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \ \ 105 \ \ \ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Asn Gly Gly Gly 115 \$120\$

- Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \\ \hspace{1.5cm} 135 \\ \hspace{1.5cm} 140$
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val $165 \\ 170 \\ 175$
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$ $190 \,$
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240
- Phe Gly Gln Gly Thr Arg Leu Glu Val Lys Arg 245 250

<210> 247

<211> 251 <212> PRT

<213> Homo sapiens

-ADD 247

Ser Val Lys Val Ser Cys Glu Ala Ser Gly Tyr Thr Phe Ser Asn His

- Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ \$40\$ \$45\$
- Gly Trp Ile-Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55 \hspace{1cm} 60 \hspace{1cm}$
- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys \$90\$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \hspace{1cm} 105 \hspace{1cm} 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 , 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \hspace{1cm} 200 \hspace{1cm} 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$215\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 248

<211> 251

<212> PRT

<213> Homo sapiens

<400> 248

Gln Val Gln Leu Val Gln Ser Val Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly	Ile	Ser 35	Trp	Val	Arg	Gln	Ala 40	Pro	Gly	Gln	Gly	Leu 45	Glu	Trp	Val
Gly	Trp 50	Ile	Ser	Gly	His	Asp 55	Asp	Ser	Thr	Lys	Tyr 60	Ala	Gln	Lys	Phe
Gln 65	Gly	Arg	Val	Thr	Met 70	Thr	Ala	Asp	Thr	Ser 75	Thr	Ser	Thr	Ala	Tyr 80
Ile	Glu	Leu	Arg	Ser 85	Leu	Lys	Ser	Asp	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	Суз
Ala	Arg	Pro	Phe 100	Tyr	Asp	Thr	Leu	Thr 105	Ser	Tyr	Val	Phe	Gln 110	Tyr	Phe
Asp	His	Trp 115	Gly	Gln	Gly	Thr	Met 120	Val	Thr	Val	Ser	Ser 125	Gly	Gly	Gly
Gly	Ser 130	Gly	Gly	Gly	Gly	Ser 135	Gly	Gly	Gly	Gly	Ser 140	Ala	Leu	Glu	Thr
Thr 145	Leu	Thr	Gln	Ser	Pro 150	Asp	Thr	Leu	Ser	Leu 155	Ser	Pro	Gly	Glu	Arg 160
Ala	Thr	Leu	Ser	Cys 165	Arg	Ala	Ser	Gln	Ser 170	Val	Thr	Arg	Gly	Trp 175	Val
Ala	Trp	Tyr	Gln 180	Gln	Lys	Pro	Gly	Gln 185	Ala	Pro	Arg	Leu	Leu 190	Met	Tyr
Gly	Thr	Ser 195	Arg	Arg	Ala	Thr	Gly 200	Val	Pro	Asp	Arg	Phe 205	Ser	Gly	Ser

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg

<210> 249 <211> 251

<212> PRT

<213> Homo sapiens

<400> 249 Gin Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.25in} 90 \hspace{0.25in} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \,$ $\,$ $\,$ $110 \,$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr $130\,$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Asn Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 \$180\$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 250

<211> 251

<212> PRT <213> Homo sapiens

<400> 250

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 $$ 10 $$ 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \\ 105 \\ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Ala Trp Val $165 \\ 170 \\ 175$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 251 <211> 251

<211> 251 <212> PRT

<213> Homo sapiens

<400> 251

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 1

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe
50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95$

Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200 \ \ 205$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230230235

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 252

<211> 251

<212> PRT

<213> Homo sapiens

<400> 252

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \\ 25 \\ 30$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu His Tyr His $100 \hspace{1.5cm} 105 \hspace{1.5cm} 110 \hspace{1.5cm}$

Thr His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 135 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 170

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 185

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 235 225 230

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245

<210> 253

<211> 251

<212> PRT <213> Homo sapiens

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 5

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 40 35

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 295

65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe $100 \ \ 105 \ \ \ 110$

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Asp Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Ala Gly Val Pro Asp Arg Phe Ser Gly Ser $195 \\ 200 \\ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 254

<211> 251

<212> PRT

<213> Homo sapiens

<400> 254

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Asn Lys Pro Gly Ala

Ser Val Lys Gly Ser Cys Lys Ala Tyr Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$ \$40\$ \$45\$

Gly Trp Ile Asn Asp His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 55$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Tyr Thr Ser Thr Ala Tyr 65 7075 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95 \hspace{1cm}$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile His Phe Leu 100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr $180 \,$ $185 \,$ $190 \,$

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 \$215\$

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 255

<211> 251

<212> PRT

<213> Homo sapiens

<400> 255

Gln Val Gln Leu Val Gln Ser Ala Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val \$35\$

Gly Trp Ile Ser Gly His Gly Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 60

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1cm} 70 \hspace{1cm} 75 \hspace{1cm} 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Ile Pro Phe Leu 100 105 110

Pro Leu Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 $200 \ \ 205$

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr

225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 256 <211> 251 <212> PRT

<213> Homo sapiens

<400> 256 Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30 \hspace{1.5cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 50 55 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75 \hspace{1.5cm} 80$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Ala Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 $$ 215 $$ 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 257 <211> 251

<212> PRT <213> Homo sapiens

<400> 257

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His $20 \hspace{1cm} 25 \hspace{1cm} 30 \hspace{1cm}$

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $_{\mbox{35}}$ $_{\mbox{40}}$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr $65 707575$

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe 100 105 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 300

145 150 155 160

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr $225 \\ 230 \\ 235 \\ 240$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 258

<211> 251

<212> PRT

<213> Homo sapiens

<400> 258

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Glu Leu Glu Trp Val 35 40 45

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe $50 \hspace{1cm} 60$

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80

Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Phe Gln Tyr Phe \cdot 100 \cdot 105 \cdot 110

Asp His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 120 115

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Ala Leu Glu Thr 135 130

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 155 150

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val 165 170 175

Ala Trp Tyr Gln Gln Arg Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 215 220 . 210

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 230 235 240

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 259 <211> 251

<212> PRT

<213> Homo sapiens

<400> 259

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 5 10

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 25 20

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val 45 4.0

Gly Trp Ile Ser Gly His Asp Asp Ser Thr Lys Tyr Ala Gln Lys Phe 55 60 50

Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 302

65 70 75 80

Tle Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Met His Tyr Leu 100 105 110

Pro Val Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 120 125

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Leu Glu Thr 130 135 140

Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 \$150\$

Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$ \$170\$ \$175\$

Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 . 190

Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205

Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220

Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr $225 \hspace{1.5cm} 230 \hspace{1.5cm} 235 \hspace{1.5cm} 240 \hspace{1.5cm}$

Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg 245 250

<210> 260 <211> 251

<212> PRT

<213> Homo sapiens

<400> 260

Gln Val Gln Leu Val Gln Ser Gly Val Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Asn His 20 25 30

Gly Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val $35 \ \ 40 \ \ 45$

- Gln Gly Arg Val Thr Met Thr Ala Asp Thr Ser Thr Ser Thr Ala Tyr 65 70 75 80
- Ile Glu Leu Arg Ser Leu Lys Ser Asp Asp Thr Ala Val Tyr Tyr Cys $85 \hspace{0.25in} 90 \hspace{0.25in} 95$
- Ala Arg Pro Phe Tyr Asp Thr Leu Thr Ser Tyr Val Leu Glu Phe Phe 100 105 110
- Ser His Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly 115 \$120\$
- Gly Ser Gly Gly Gly Gly Gly Gly Gly Ser Ala Leu Glu Thr $130 \ 135 \ 140 \ \cdot$
- Thr Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Ser Pro Gly Glu Arg 145 150 - 155 160
- Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Thr Arg Gly Trp Val \$165\$ \$170\$ \$175\$
- Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Met Tyr 180 185 190
- Gly Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser 195 200 205
- Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu 210 215 220
- Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Thr Ser Pro Arg Thr 225 230 235 240
- Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys Arg $245\,$. $\,250\,$

<210> 261

<211> 244

<212> PRT

<213> Homo sapiens

<400> 261 Gln Val Gln Leu Ala Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg 1 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Asp Asp Tyr 20 25 30

Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Asp Trp Val 35 40 45

Ser Ala Ile Thr Trp Asn Ser Gly His Ile Asp Tyr Ala Asp Ser Val 50 60

Glu Gly Arg Phe Ala Val Ser Arg Asp Asn Ala Lys Asn Ala Leu Tyr 65 70 . 75 80

Leu Gln Met Asn Ser Leu Arg Pro Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Thr Lys Ala Ser Tyr Leu Ser Thr Ser Ser Ser Leu Asp Asn Trp Gly $100 \hspace{1cm} 105 \hspace{1cm} 105 \hspace{1cm} 110 \hspace{1cm}$

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly 115 \$120\$

Gly Gly Ser Gly Gly Gly Ser Asp Ile Gln Met Thr Gln Ser Pro 130 135 140

Ser Ser Leu Ser Ala Ser Ile Gly Asp Arg Val Thr Ile Thr Cys Arg 145 \$150\$

Ala Ser Gln Gly Ile Arg Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro $165 \hspace{1cm} 170 \hspace{1cm} 170 \hspace{1cm} 175$

Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Thr Leu Gln Ser 180 185 190

Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr $195\ .$

Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Val Ala Thr Tyr Tyr Cys 210 215

Gln Lys Tyr Asn Ser Ala Pro Tyr Ala Phe Gly Gln Gly Thr Lys Val